



# INSTRUCTION MANUAL

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*Protect what you value most.*™

# **IMPORTANT! PLEASE READ!**



# **NEED HELP?**

**DO NOT RETURN THIS  
PRODUCT TO THE STORE**

Please contact a DEFENDER® customer support representative first regarding any additional information on product features, specifications or assistance with setup.

Please contact us via one of the methods below:

Support:

**[www.defender-usa.com/contact\\_us](http://www.defender-usa.com/contact_us)**



Online live web chat:

**[Visit www.defender-usa.com](http://www.defender-usa.com)**

For more product information visit **[www.defender-usa.com](http://www.defender-usa.com)**

**Note: This is manual version 1.0 you may find updated versions by visiting our website.**

# WARRANTY INFORMATION

## PRODUCT WARRANTY INFORMATION

Please visit our website at [www.defender-usa.com](http://www.defender-usa.com) for information about your product's warranty.

We take quality very seriously. That is why all of our products come with a one-year warranty from the original purchase date against defects in workmanship and materials. If you have warranty or support issues please contact us using any of the following methods:

**Support:** [www.defender-usa.com/contact\\_us](http://www.defender-usa.com/contact_us)

**Website:** [www.defender-usa.com](http://www.defender-usa.com)

**DEFENDER® USA**

60 Industrial Parkway #Z64  
Cheektowaga, NY  
USA 14227

**DEFENDER® CANADA**

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Niagara Falls, ON  
Canada L2H 1J9

### Warranty Terms

1. DEFENDER® products are guaranteed for a period of one year from the date of purchase against defects in workmanship and materials. This warranty is limited to the repair, replacement or refund of the purchase price at DEFENDER®'s option.
2. This warranty becomes void if the product shows evidence of having been misused, mishandled or tampered with contrary to the applicable instruction manual.
3. Routine cleaning, normal cosmetic and mechanical wear and tear are not covered under the terms of this warranty.
4. The warranty expressly provided for herein is the sole warranty provided in connection with the product itself and no other warranty, expressed or implied is provided. DEFENDER® assumes no responsibilities for any other claims not specifically mentioned in this warranty.
5. This warranty does not cover shipping costs, insurance, or any other incidental charges.
6. You MUST call DEFENDER® before sending any product back for repair. You will be sent a Return Authorization number with return instructions. When returning the product for warranty service, please pack it carefully in the original box with all supplied accessories, and enclose your original receipt or copy, and a brief explanation of the problem (include RA #).
7. This warranty is valid only in Canada and the continental U.S.
8. This warranty cannot be re-issued.



### CAUTION

RISK OF ELECTRIC SHOCK, DO NOT OPEN UNIT



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (BACK).  
NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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# INTRODUCTION

Congratulations on your purchase! This user-friendly system will allow you to monitor and protect your home or business. The coaching SmartMenu makes setting up and using your DVR very easy with helpful information to assist you. The DVR comes equipped with H.264 compression which allows you to record and store more footage using less space; therefore never missing an event. This manual was written to ensure that you get the most out of your purchase.

## WHAT IS INCLUDED



DVR w/ 500BG Hard Drive



4 Window  
Warning Stickers



DC12V Power  
Adapter for DVR



10ft. RJ-45 Cable



Software and Manual CD



IR Remote Control



USB Mouse



- Quick Start Guide
- RCA to RCA ( Male) Cable
- 1 Year Warranty
- Lifetime Live Customer Support

# FEATURES

## **Extremely Easy to Set Up and Use**

You'd expect a system that keeps such a close eye over all you hold dear to be complex. You'll be surprised how easily this DEFENDER® system operates. It functions like a computer, with a mouse for pointing and clicking and an intuitive icon-based Smart Menu™ that provides prompts and coaching to assist you in navigating the system. It's so simple to use, it will even begin recording as soon as you plug it in.

## **View Your Camera Footage From Anywhere in the World**

Everyone needs a vacation to get away from it all. With DEFENDER® you can enjoy with peace in mind, knowing you can view your camera footage live online, anytime and anywhere. You can use search engines such as Internet Explorer®, Firefox®, Chrome™ or Safari® from a PC or Mac. You can also view footage on almost any smartphone, including iPhone®, BlackBerry®, Android™, Windows Mobile®, or Symbian™, as well as on your iPad® and most other tablets. Whether monitoring your business or home, you will always feel in control.

## **Instant Email Alerts if Activity Detected**

You will instantly know if any suspicious activity is happening on your property. This DEFENDER® system is designed to send you an email alert, complete with photo, if any motion is detected on your property or if any of your cameras experience video loss. You'll always be in the know, no matter where you are.

## **Two Years' Worth of Footage Storage - and More if you Need it**

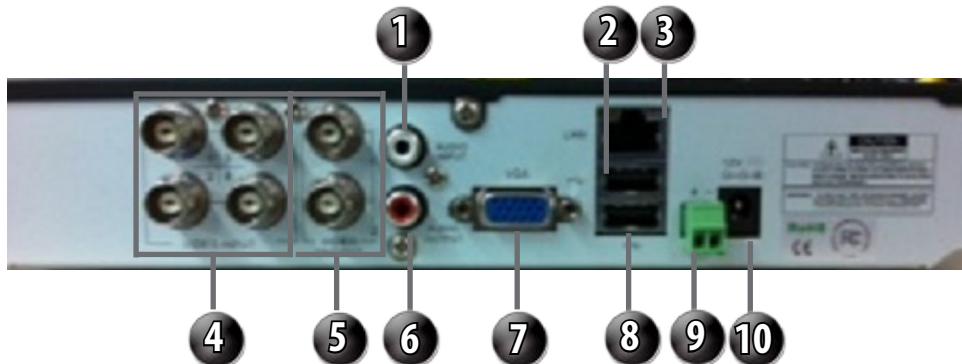
The included 500 GB hard drive allows continuous monitoring and recording of over two years' worth of footage! Your DVR sends an alert when your memory space is full so that you can choose to overwrite old video or stop the unit from recording. The built-in USB port gives you the option of backing up and transferring your video footage with a USB flash drive or external USB hard drive. And if you need to expand your storage even further, you can choose to record only when motion is detected. You can also program certain cameras for motion-activated recording while the others record continuously. This system will also perform H.264 compression which maximizes recording time and transfers data more efficiently via the internet. You'll use 50% less storage space than when recording normally, while still benefitting from high-quality imagery.

## **Lifetime Live Customer Support**

Our customer support team can be reached on our website at [www.defender-usa.com/contact\\_us](http://www.defender-usa.com/contact_us) or via live web chat. Our experts will be happy to assist you in English, French and Spanish.

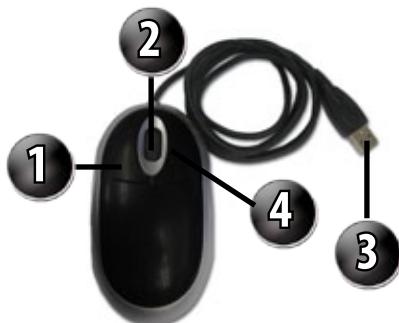
# CONNECTIONS

## DVR BACK



1. **Audio Input:** Accepts a microphone and/or audio-supported camera (not included).
2. **Mouse input:** Connect the USB (before power up).
3. **LAN Connection:** Connects to router.
4. **Camera Connect:** Camera connections for cameras.
5. **Video Output:** Accepts up to two monitors
6. **Audio Output:** Connects to speaker/audio input.
7. **VGA:** Connects to VGA monitor.
8. **USB Connection:** Connect USB drive for backup.
9. **PTZ:** Connects to two-wire PTZ camera (not included).
10. **Power Connection:** Connect DVR to power source.

## MOUSE



1. **Select:** Click this button to select highlighted object.
2. **Scroll Wheel:** This wheel has no function on this DVR.
3. **USB Connection:** Connects to the USB mouse port (top port) on the back of the DVR.
4. **Deselect:** Allows you to exit the menu you are currently in. When in live view, it will open the submenu.

# BUTTONS AND CONNECTIONS

## REMOTE CONTROL



1. **Numerical Keypad:** Buttons 1-8 displays the corresponding camera on full screen.  
**0 disables / enables the mouse.**
2. **All:** Switch to all camera viewing mode.
3. **Menu:** Access the main menu and exit the current menu.
4. **Select/Enter:** Allows you to select options.
5. **Directional Keys:** Allow you to navigate through the menu.
6. **Audio/Search:** Searches and finds any channels that have an audio-supported camera attached to it (not included).
7. **Mute:** Mutes sound.
8. **Rewind:** Rewinds footage.
9. **Record:** Begins recording based on the 24 hour schedule.
10. **Pause:** Pauses playback footage and starts/stops sequence mode.
11. **Play:** Calls up the playback menu.
12. **Fast Forward:** Fast forwards through playback footage and allows you to navigate the menu to the right.
13. **Stop:** Stops recording and/or playback footage.

# BASIC SETUP

## Things to Consider Before Installation

- The camera should be installed between 8 and 13ft above the area to be monitored.
- Before screwing in the mount for the camera ensure there are no obstructions in the camera's view.
- Place cameras in the most strategic places where they can provide detailed, recorded video of every visitor.
- Having the camera in the open for people to see can help deter criminals.
- To cover large, dark areas such as backyards, garages, and driveways, place cameras in strategic locations, such as on the roof or deck, this way, less cameras are needed to cover an area.
- Ensure that the sunshade is positioned to avoid glare and be sure to position camera away from direct sunlight or other light sources.
- For best results, the light in front of the camera should be about the same brightness as the light around the area or object being monitored.
- Decide whether the camera will be wall-mounted, ceiling-mounted\*, or sit on a desk/tabletop. If you are mounting the camera on a wall or ceiling\*, use the included mounting hardware. We recommend that the mounting bracket is secured using the included screws for all installations.
- Each camera comes with 65ft of video/power wire. Please make sure that you mount the cameras no more than 195ft from the DVR. If longer wiring distance is required, extension cables can be purchased (21007/21008/21009) from your local re-seller or at [www.defender-usa.com](http://www.defender-usa.com).
- We recommend using a surge-protected power bar to protect the camera's internal circuitry.

## Mounting the Cameras

1. Decide if the camera will be wall-mounted or sit on a desk/tabletop. The camera can be adjusted for either mounting scenario by rotating it to the required position.
2. Screw the mounting bracket into the camera's mounting hole, turning it clockwise.
3. Mount the camera in the desired location no more than 65 ft from the DVR unless you have purchased additional wiring. You may mount the cameras on a wall, ceiling\* or desk.
4. Ensure that the cameras are strongly secured.
5. Adjust cameras to the desired viewing angles.
6. For additional help on mounting the cameras, please see the drilling template, located at the back of the manual.

**\*NOT ALL CAMERA STYLES CAN BE MOUNTED ON THE CEILING. PLEASE VERIFY THE CAMERA INSTALLATION INSTRUCTIONS SPECIFIC TO YOUR CAMERA.**

Adjust camera to desired viewing angle

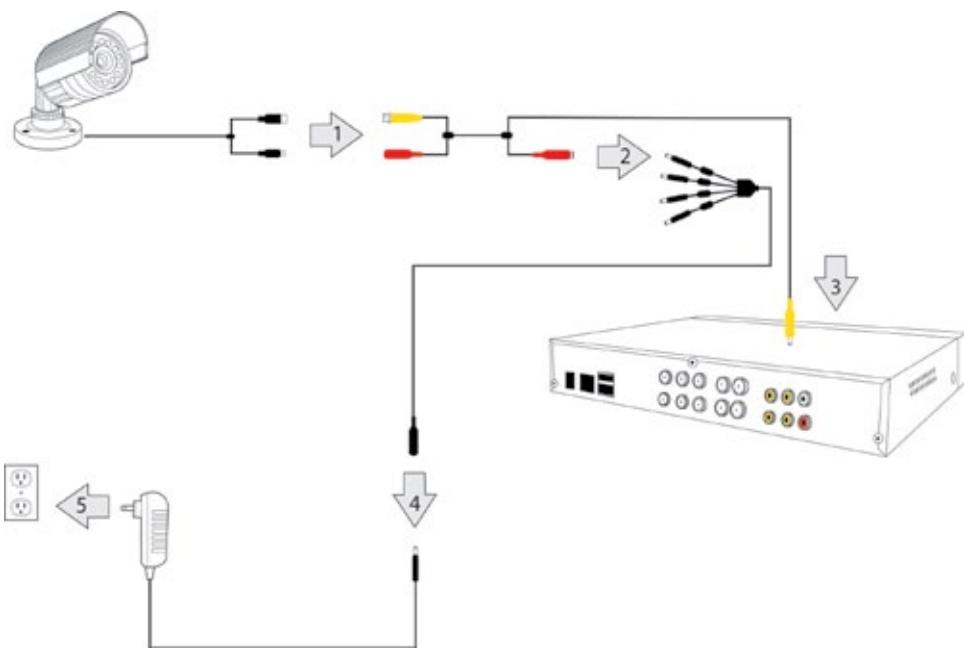


Ensure the camera is secured into place



# BASIC SETUP

## WIRING FOR CAMERAS



# BASIC SETUP

## CONNECTING ADDITIONAL DEVICES

### CONNECTING A USB Mouse

1. Plug the USB connection on the mouse into the top USB connection on the back of the DVR.

Plug Mouse into top USB port



### CONNECTING A MONITOR

1. Connect the BNC to RCA connector to the top VIDEO OUT connection on the back of the DVR.
2. Plug the RCA cable into the BNC connector.
3. Attach the other end of the RCA cable to a yellow RCA video input on your TV/monitor.
4. Switch the TV/Monitor source to view the DVR. (Consult the TV/Monitor manual for instructions on how to switch the video source).
5. The bottom video out is for a second monitor. Plugging an RCA cable into this video out would be the same as plugging it into the top video output.

Connect BNC to RCA connector



Plug RCA cable to BNC connector



## POWERING ON DVR

1. Plug the power cord into a power outlet (surge protected power outlet recommended).
2. Insert the small end of the power supply wire into the rear DC 12V port on the DVR.
  - After a few seconds the splash screen will appear and the DVR will start up.

Connect to a power source to turn on DVR



# GETTING STARTED

## GETTING STARTED

Now that you have powered up the DVR and connected it to a TV or monitor you are ready to begin setting up and using the DVR. You will notice the coaching SmartMenu information bubbles at the bottom of the screen describing the settings that you will find in the menu. As an added convenience the DVR will automatically begin recording once it is powered on as long as at least one camera is connected.

## USING THE MOUSE

- The included USB mouse makes using the DVR simple and efficient. Using the mouse will make controlling the DVR very similar to using a computer. It will allow you to easily click on items to select them and make desired changes.



## SCREEN VIEWING

By double clicking one of the camera screens, the viewing mode will switch to full screen mode. Double clicking again will bring you back to the all camera screen mode. From full screen mode you can zoom into an area of the screen. For more information on zooming in, please see ZOOM in FUNCTION TOOLBAR.

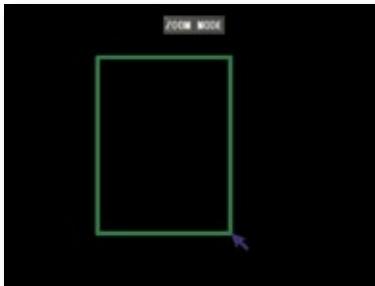
### Full Screen



### Quad Screen



### Zooming in



# FUNCTION TOOLBAR

## FUNCTION TOOLBAR

The Function Toolbar can be accessed 3 different ways:

1. **By right clicking the mouse anywhere on the screen.**

To access items on this menu with the mouse move the mouse pointer over the option to highlight it and left-click. To exit, move the pointer off the menu and right click.

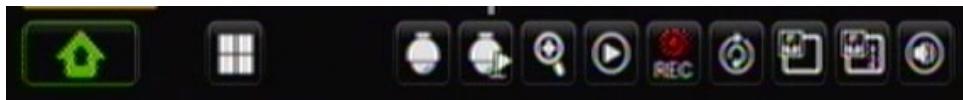
2. **Moving the mouse to the bottom of the screen.**

To access items on this menu with the mouse move the mouse to the bottom of the screen and a menu bar will appear. Here you can access the main menu or a few quick activating settings. To exit, move the pointer off the menu and right click.

3. **Pressing SELECT on the remote.**

To access items on this menu with the remote, use the arrow keys to move and when the option is highlighted, press SELECT. To exit, press the MENU button.

### Function Toolbar



### MAIN MENU

This icon accesses the MAIN MENU which enables you to change settings in Display, Record, Search, Network, Alarm, Device, System and Advanced.



### Lock

This icon appears when you have enabled a user password. This allows the user to lock and unlock the Main Menu. The default password is **123456**.



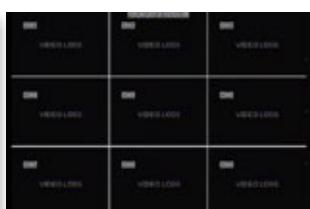
### SPLIT SCREEN MODE

Selecting this while in full screen mode will allow you to enter quad, 9, or 16 screen view.

#### Quad Screen



#### 9 Channel View



#### 16 Channel View



# FUNCTION TOOLBAR



## PTZ CAMERA

This shortcut opens the PTZ menu. PTZ stands for Pan, Tilt, Zoom cameras (not included). This menu option only controls compatible PTZ cameras that are properly setup in the device management section of the menu.



### **The PTZ camera tools are:**

**Directional keys:** Moves the camera in the direction of the arrow

**Zoom:** The + zooms in and the – zooms out.

**Focus:** The + focuses the picture and the – removes the focus. This is useful if an object is either close range or long range and is being displayed blurry.

**Iris:** The + lets in more light and the – removes light from the image. This is useful for varying lighting situations as well as correcting backlight issues.

**Speed:** Allows you to adjust the speed that the camera will move.

**Cruise Setup:** Allows you to set preset positions for the PTZ to follow. The PTZ camera will cruise through your set positions and times. Not all PTZ cameras have this function.

### **To Set CRUISE:**

1. Right click the mouse and select the PTZ icon.
2. Select the channel that the PTZ camera is connected to. (The PTZ camera must already be configured.)
3. Click on the TIME text field and input the time (in seconds) for how long you would like the PTZ camera to stay at that position.
4. Use the directional buttons to adjust the camera to the areas you would like the PTZ camera to view in cruise mode. Press the SET button at each desired position.
5. To review your set points, select the NO. text field and input the number you would like to view.
6. Click SAVE and then EXIT.
7. To erase Preset cruise points select the CLEAR button.
8. To start the PTZ cruise, open the shortcut menu and select START CRUISE. To stop the PTZ cruise, open the shortcut menu and select STOP CRUISE.

# FUNCTION TOOLBAR



## START CRUISE

This option prompts the PTZ cruise to start (if you have set up the PTZ cruise). Click it again to stop the PTZ cruise.



## ZOOM

When viewing a camera in full screen mode, your function toolbar gives you an option to zoom in. This function allows you to get a better view of what you are monitoring.

### To ZOOM:

1. Double click the screen you would like to zoom in on. This will open to full screen mode.
2. Right click the mouse, scroll to ZOOM and press select.
3. Using the mouse, click and drag a square around the area you would like to zoom in on.
4. Once the square has been set, release the mouse button and the screen will zoom in on the selected area.
5. To exit the zoomed in screen, right click the mouse.



## RECORD SEARCH

This shortcut prompts the video search menu to appear. It allows you to search through the previously recorded footage. For more information on the video search menu, please see the PLAYBACK section of this manual.



## START / STOP RECORD

This shortcut prompts the DVR to start or stop recording. This function works if the DVR's schedule is set to MOTION RECORD and you would like to record in between motion detection events.



## START/ STOP ROTATE

1. Right click the mouse and select START ROTATE. The cameras will then start sequencing through.
2. To stop auto sequence, double click the screen or open the FUNCTION TOOLBAR and select the STOP ROTATE ICON.
3. To return to quad, 9, or 16 screen view, open the FUNCTION TOOLBAR and select the SPLIT SCREEN icon.

# FUNCTION TOOLBAR



## PIP Mode

PICTURE IN PICTURE (PIP) mode allows you to view camera one in full screen and up to two camera channels (of your choice) as smaller screens in either corner of the screen. You must have at least one camera connected to your DVR for PIP mode to function properly.

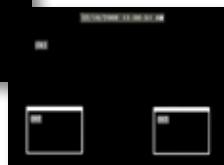
### To turn on PIP mode:

1. Right click and then select PIP Mode 1x1 or PIP Mode 1x2.
2. 1x1 allows you to view camera one in full screen and another camera in the lower left corner of the screen. 1x2 allows you to view camera one in full screen and two other cameras in the bottom left and right corners of the screen.
3. To exit PIP mode, right click the mouse.

### PIP Mode 1x1



### PIP Mode 1x2



## VOLUME

If you have connected audio-enabled cameras to the DVR you can adjust the level of sound or mute all noise being recorded. Select the VOLUME icon in the FUNCTION TOOLBAR. You can adjust the volume level using the bar or mute by checking the MUTE box. Select the SAVE DISK icon to save your settings.

# MAIN MENU

1. The MAIN MENU can be accessed by pressing the MENU button on the remote control or by right clicking the mouse, then selecting the MENU icon.
2. To make a selection from the MAIN MENU, left-click the mouse or press SELECT on the remote.
3. When access any sub-menus, there are a few options available at the bottom of the screen:
  1. **Default:** Restores all of the settings on the current page to the default settings.
  2. **Apply:** Applies and saves changes made to the current menu page.
  3. **Exit:** Exits the current menu.



*Note: All sub menus have some or all of the above options.*

# MAIN MENU

## USING THE KEYBOARD

The keyboard is used when typing in passwords, dates and to label/name certain functions. This keyboard will appear multiple times when working with your DVR.

1. To select letters, left-click the mouse or press SELECT on the remote control. Selecting the SHIFT key on the keyboard changes the letters to lower case and displays additional characters. To erase, select the backspace  key.
2. When you have finished typing, select the ENTER key on the keypad to close the keyboard.

### Keyboard



# MAIN MENU

## DISPLAY SETUP

The DISPLAY SETUP menu has 3 tabs; Live, Output and Privacy Zone. This menu allows you to name each camera, adjust where the title of the camera appears on screen, adjust the color of each camera, turn cameras on and off as well as decide on where the time will be displayed on screen.

### LIVE TAB

The LIVE TAB allows you to customize the name and position of the camera name. Customizing camera names allow for easy recognition of locations you are monitoring.

#### Title

This will be the name of the camera that is displayed on screen. It is good to name the camera something to reflect what the camera is monitoring. Ex. Garage or Driveway. A maximum of 8 characters can be used.

#### **To change the NAME of the cameras:**

1. Select the camera that you would like to adjust the settings for.
2. Select the camera NAME option under the camera number you would like to change and a keyboard will appear.
3. Enter the TITLE of the camera you would like, then select enter to close the keyboard.
4. Select APPLY from the main camera menu to save your changes.
5. Repeat for all desired cameras.

#### Position

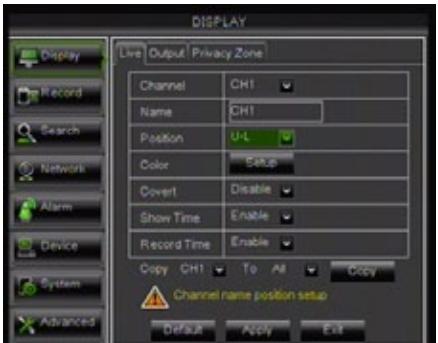
This will determine where the camera name will be displayed in the camera viewing window.

#### **To change the POSITION of the title:**

1. Select the POSITION option and a drop down list will open.
2. Select the position where you would like the title to appear on the camera screen. If you would like the name NOT to display, set the position to CLOSE.
3. Repeat for all desired cameras.
4. Select APPLY to save the changes.

U-L	→	Upper-Left
D-L	→	Down-Left
U-R	→	Upper-Right
D-R	→	Down-Right

#### Display Menu



# MAIN MENU

## Color Setup

Clicking this button will allow you to adjust the image settings for an individual camera.

### **To adjust the COLOR on a camera:**

1. Select the COLOR SETUP button and a full screen view of the selected camera will appear along with scroll bars to adjust Hue, Brightness, Contrast and Saturation.
2. To turn the settings up and down, click and drag the bar in the center.
3. Once you have adjusted the color to your liking, select APPLY and then EXIT to return to the camera menu.
4. Repeat for all desired cameras.



## Covert

Choose whether or not to display a camera in LIVE VIEWING mode. The camera will record and playback normally, but it will not appear on the LIVE VIEWING screen. This is beneficial so that only authorized users can see what the camera is monitoring.

### **To turn the LIVE VIEWING of a camera on or off:**

1. Select the LIVE option and a drop down list will open.
2. Select ENABLE or DISABLE from the drop down list to turn the camera ON or OFF.
3. Repeat for all desired cameras.
4. Select APPLY to save the changes.

## Display Time

This DVR gives you an option to display the time while it is RECORDING and while it is in LIVE VIEW mode. The default setting has both time displays set to ENABLE.

### **If you would like to turn either the TIME DISPLAY or RECORD TIME display OFF or ON:**

1. Select the LIVE TIME option or RECORD TIME option and choose either ENABLE or DISABLE .
2. The time display will now be changed.
3. Select APPLY to save settings.

# MAIN MENU

## Copy

This DVR gives you an option to copy all display selections from one camera to another, or to all cameras.

### To **COPY** settings from one camera to other cameras:

1. Select the COPY option and choose a camera number or ALL cameras.
2. The settings from the currently viewed camera will now be copied to the camera(s) selected from the drop down list.
3. Select APPLY to save settings.

## OUTPUT TAB

### Rotate Time

#### **ROTATE TIME:**

You can set the DVR to automatically switch channels every few seconds while in live mode.

1. Select the text box beside ROTATE TIME, input the amount of time in seconds that you would like each camera view to play full screen on your DVR. Select ENTER  key.
2. Select APPLY to save your changes.

### VGA Resolution

#### **To adjust VGA RESOLUTION:**

1. Select the scroll bar next to VGA RESOLUTION and a list will appear.
2. Highlight the resolution you would like.  
NOTE: The higher the resolution, the more space it will use on your HDD.
3. Select APPLY to save your changes.



### Initial Device (Init. DEV.)

#### **To set the INIT. DEVICE type:**

1. Select the drop down bar next to INIT. DEV and a list will appear.
2. Highlight the device type you are using: VOUT, VGA, or AUTO.
3. Select APPLY to save your changes.

## GUI TO LCD (VGA)

If you connect the DVR to a television and the DVR is set to LCD (VGA) the mouse and remote will not function.

# MAIN MENU

## Transparency

This allows for the appearance of the menu to appear either clear or solid.

### To adjust the TRANSPARENCY:

1. Click and drag the bar in the center next to TRANSPARENCY.
2. Click on APPLY to confirm settings.



## Volume and Margin

These options let you customize the look and sound of your recordings.

### Margin

#### To adjust MARGINS:

1. Select the MARGINS option and the margin screen will appear.
2. Slide the cursor from 0 to 36 to set each margin, 0 being the lowest, 36 being the highest.
3. Select APPLY to save your changes.



### Volume

#### To adjust VOLUME:

1. Select the VOLUME option and the volume screen will appear.
2. Slide the cursor from 1 to 63 to set the volume, 1 being the lowest, 63 being the highest.
3. Select APPLY to save your changes.

## PRIVACY ZONE TAB

This DVR has the ability to allow you to have up to 4 privacy zones per camera. Privacy zones appear as black areas on a live view screen and are never recorded. This is good if you have a safe or other area that you do not wish to be viewed.

### To adjust PRIVACY ZONES:

1. Choose the desired camera using the drop down box.
2. Select the PRIVACY ZONE drop down box and select ON.
3. Place checkmarks beside the amount of privacy zones you wish to have (up to 4).
4. Press the MASK AREA Setup option to see the SETUP SCREEN.
5. Click and drag the boxes around the screen to place them where you need privacy zones.
6. Press the APPLY button to save your changes.
7. To copy these settings to multiple cameras, select the channel to copy.
8. Select the channel(s) you want to copy.
9. Select COPY to apply settings to all selected channels.
10. Press the APPLY button to save your changes.



# MAIN MENU

## RECORD SETUP

This option allows you to turn recording for each camera ON or OFF, set video quality, adjust the frame rate, set the resolution, enable or disable audio recording, pick a recording mode (scheduled or continuous), set the file pack time (recorded video size in minutes) and copy settings from one camera to another.

### REC PARA TAB

Recording parameters allows you to choose the channel you wish to record, turn record ON or OFF, set the Pack Duration as well as enable PreRecord if you wish to enable Motion Record.

#### Record (Enable/Disable)

**To enable/disable RECORD on channels:**

1. Select the drop down menu beside the channel(s) you would like adjusted.
2. Highlight whether you would like the camera ENABLED or DISABLED and press SELECT.
3. Select APPLY to save settings.



**To COPY settings:**

1. Select the channel at the bottom of the page that you wish to copy.
2. Select which channels you would like to apply the settings to.
3. Select COPY, then select APPLY to save settings.

#### Pack Duration

The DVR allows you to choose the maximum length that each recorded video clip will be. This is for backup purposes.

**To adjust and/or set a PACK TIME:**

1. Select the drop down menu beside PACK TIME.
2. Highlight the time you would like each recorded video clip to be (15, 30, 45 and/or 60 min) and press SELECT.
3. Select APPLY to save settings.

#### PreRecord

This function works with motion detection. If enabled the DVR will pull footage prior to motion being detected for that camera.

1. Select the drop down menu beside PREREcord.
2. Select ENABLE or DISABLE.
3. Select APPLY to save settings.

# MAIN MENU

## SCHEDULE TAB

### Record Schedule Setup

The DVR allows you to choose whether it always records, or if it records based on a set schedule or only when motion is detected. Your DVR is set to record always by factory default.



█ **Schedule Record:** (Green) Sets schedule or constant recording

█ **Motion Record:** (Yellow) Settings for motion recording

█ **No Record:** (Transparent) Footage will not record at this time

#### To program your DVR to constantly record (24/7):

1. Select the channel you wish to constantly record.
2. The top line is to schedule NORMAL RECORD. Normal record allows you to record 24/7. One click selects the individual box. Each box represents one hour. To de-select, click the box again. For example, all boxes from 0 to 23 need to be GREEN.
3. The bottom line is to schedule MOTION RECORD. Motion Record allows you to record only if motion is detected. One click selects the individual box. Each box represents one hour. To de-select click the box again. For example, all boxes from 0 to 23 need to be YELLOW.
4. To apply your customized settings to another day, select the DAY at the bottom of the screen and the click the box next to TO ALL to select the day it will be applied to, then click COPY.
5. To apply your customized settings to another channel, select the CHANNEL at the bottom of the screen and click the box next to TO ALL to select the channel it will be applied to, then click COPY.
6. Select APPLY to save your settings.

# MAIN MENU

## To set your DVR for SCHEDULE record:

1. Select the channel and the day you wish to set a record schedule.
2. Click on the top line of the time graph if you would like SCHEDULE RECORD. Schedule record will record constantly. Each box represents one hour. One click selects the box. To de-select, click the box again. The box needs to be GREEN for the hour(s) you want recorded.
3. Click on the bottom line of the time graph if you would like MOTION RECORD to be set. The DVR will only record when motion is detected for the schedule you set. The box needs to be YELLOW for the hour(s) you want recorded.
4. Select the day at the bottom you have customized and wish to apply to other days. Select a specific day or TO ALL and then COPY.
5. Select the channel at the bottom you have customized and wish to apply to other channels. Select a specific day or to all and then COPY.
6. Select APPLY to save settings.

**Note: Default schedule is set to Normal Record on a 24/7 schedule.**

## MAINSTREAM TAB

The Mainstream Tab allows you to customize the quality of your recordings. Here you can change the Resolution, the Frames per Second (FPS), the Bitrate, as well as enable audio recording if you have audio-enabled cameras.

### Resolution

Measures the sharpness of the image. The higher the resolution, the sharper the image will appear. A higher resolution uses more space when storing on the HDD.

### Frames Per Second (FPS)

The FPS settings are adjustable. A higher FPS will result in smoother and better quality recorded video. A lower FPS will result in a choppy video, however it will use less space on the HDD.

#### To adjust the FRAME RATE of recorded video:

1. Find the channel that you wish to adjust the FPS.
2. Scroll through the list (1 to 30) and the FPS you wish to record on that channel.
3. Select APPLY to save settings.



### Audio

#### To turn AUDIO RECORDING On or Off:

1. Check the AUDIO BOX next to the channel you want audio enabled. (Your camera must have audio recording capabilities.)
2. Uncheck the AUDIO BOX next to the channel you want audio disabled.
3. Select APPLY to save settings.

**Note: Higher quality and resolution settings use up more space on your hard drive.**

# MAIN MENU

## SEARCH

This option allows you to search through your previously recorded footage and find footage recorded from particular dates and times. You can access the VIDEO SEARCH menu by pressing PLAY on the remote control, PLAYBACK on the FUNCTION TOOLBAR or going into the MAIN MENU under SEARCH.

### Playback Screen



## PLAYBACK TAB

*To access and play back footage from a particular date and time:*

1. Select the CHANNEL you would like to view recorded footage from.
2. Select the DATE box; a keyboard will appear for you to input the date that you would like to see footage from. Select the ENTER key.
3. Select SEARCH to open up the search times for that date.
  - Once you have searched for a particular date, you can view times and footage from each day of that month. The box outlined in RED indicates the search date.
  - The days and times that have Motion/Alarm recorded footage are red in the time schedule.
  - The days and times that have Schedule Recording are green in the time schedule.
  - If the time is not red or green, it means there was no recording during that time.
  - To view other days or times that have footage, double click on the day in the calendar.
4. To search for a particular time on a set date, select the REPLAYTIME box, a keyboard will appear to input the start time of the footage you would like to view. Select the ENTER key.
5. Click on PLAY to start viewing from that date and time.
6. If footage was recorded within the selected date and time slot, the footage will begin to play. If nothing was recorded, a screen will appear and read "NO RECORD FILE IN THE CHANNEL". Check your Date/Time and try searching to see what video footage is available.

# MAIN MENU

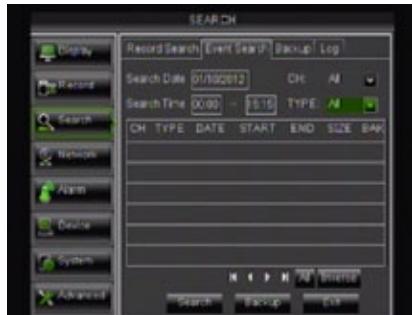
## EVENT SEARCH TAB

This DVR allows you to view the file list for each day that you have recorded footage. The file list allows you to see what type of recording it was (NORMAL, MOTION DETECTION), the date and time the footage was recorded, the size of the footage, as well as gives you the option to backup particular recorded events.

### To access the file from the video search menu:

1. Select a channel you would like to view footage from.
2. Select the DATE box; a keyboard will appear for you to input the date that you would like to see footage from. Select the ENTER [] key.
3. Select SEARCH to open up the available files for that date. The days and times that have recorded footage stored on them are shown in this list.
4. If you would like to filter out the types of recordings on this list, select what type of recording you would like to see from the drop down menu next to the word TYPE. You can view MOTION recordings, SCHEDULE recordings or ALL recordings.
5. The list displays the following information (from left to right).
  - **CH:** The channel with recorded footage.
  - **Time:** The time range that the footage was recorded .
  - **Size:** The size of the file – the larger the file the longer the video clip.
  - **Type:** The type of footage that was recorded (ALARM or NORMAL).
  - **BAK:** Allows you to select video clips to backup onto a USB device .
6. The buttons along the bottom of the list, when highlighted and selected do the following:
  - **First:** Brings you the beginning of the list (oldest footage first).
  - **Prev:** Brings you back a page if not already on the first page.
  - **Next:** Brings you forward a page.
  - **Last:** Brings you to the last page of recorded footage (most recent footage is last).
  - **All:** Selects all footage on the page to be backed up .
  - **Inverse:** Deselects the selected footage and selects non-selected footage for backup.
  - **Backup:** Prompts backup of the selected video clips.
  - **Exit:** Exits the file list.

### File List Menu



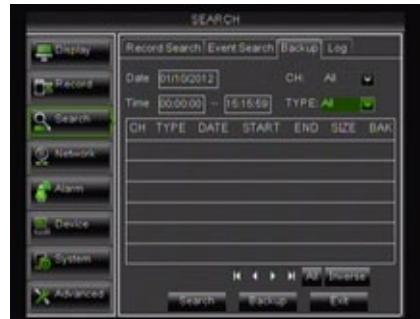
# MAIN MENU

## BACKUP TAB

Your DVR allows you to backup footage to a USB device, USB HDD, or a USB CD/DVD burner and play it back on your computer.

### To Backup footage onto USB device:

1. Make sure a USB device or USB burner is plugged into the proper USB connection on the back of the DVR.
2. Access the file list from the particular day you would like footage backed up.
3. Select the box under the word BAK next to the video clip(s) you would like backed up.
4. Select the BACKUP button.
5. This will prompt the DVR to begin backing up footage. A message will appear "BACKING UP, DON'T REMOVE USB!"
6. Once the selected footage has backed up onto the USB device or USB burner, a message will appear "BACKUP FINISHED!" Select EXIT to exit the menu.
7. To view the backed up footage on your USB device please see COMPUTER PLAYBACK section of the manual. To view the backed up footage on a CD/DVD, follow the basic instructions for your CD/DVD player.



**Note:** *The Backup format is .264 and will require the included software to play the file. Video clips can also be played back using the web viewer.*

## LOG TAB

To view the log of files in the order that they were recorded. Here you can choose to view files based on recording type and time frame.

1. Select the recording type and time frame and press the SEARCH button, the list of files will come up on the screen.
2. Insert a USB device into any open USB port.
3. Select BACKUP, the entire list will be exported to your USB device. A message will appear "BACKING UP, DON'T REMOVE USB!"

# MAIN MENU

## NETWORK SETUP

The NETWORK SETUP menu is your gateway to viewing your footage online. This menu holds the information you need to set up online viewing. The DVR is preconfigured to work with most basic network setups and the values shown on the screen are the values you will be using to set up and view the DVR on a computer.

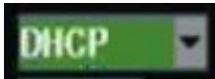
### NETWORK TAB

The NETWORK SETUP menu allows you to configure all the settings necessary to view your DVR online. You can configure the way the DVR acquires an IP address, adjust which ports are used to communicate with the DVR, adjust your DNS as well as set your information for a DDNS account

#### Type

Determines how the DVR will acquire an IP address; DHCP, Static or PPPoE.

#### DHCP:



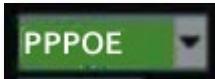
DHCP (Dynamic Host Configuration Protocol) address is the most common setup for home or office networks. This allows the DVR to automatically receive an IP address from the router. By default the IP mode will be DHCP .

#### Static IP:



Static IP addresses are manually assigned by an administrator. A static IP address would be beneficial if your internal IP address changes often. Most home or office networks today do not use static IP addresses. If you are unsure of whether you need a static or dynamic IP address, please contact your network administrator.

#### PPPoE:



Used for DSL services where individuals connect to a DSL modem. It is recommended to store the PPPoE information in the router, if the PPPoE information is not stored in the router, the DSL modem will need to be configured. If you are using a PPPoE connection, contact your Internet Service Provider for your PPPoE name and password.

#### ***To adjust the type of IP Mode you are using:***

1. Select the drop down menu beside the word TYPE.
2. Highlight the IP Mode you would like to use and press select.
3. Select APPLY to save settings.

# MAIN MENU

## Client Port:

This port is used to transmit images from the DVR. It is recommended that this port remain on port 9000.

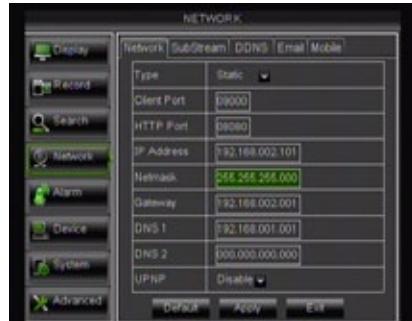
## HTTP Port:

This port is used to initiate communication to the DVR. The HTTP port is entered at the end of the IP address to connect to the DVR. If using the default port (80), your Internet browser will automatically add port 80 at the end of the address, even though it may not be visible. If using a port other than 80, you will need to add that port to the end of the IP address when typing it into the web browser. (Ex. If using port 2000 and the IP address is 192.168.1.103 you would type <http://192.168.1.103:2000> in the address bar of Internet Explorer).

### To Change the port you are using:

1. Select the box next to the port you would like to change and a keyboard will appear.
2. Type the port number you would like to use then select the ENTER  key. The ports cannot be the same number
3. Select APPLY to save your changes.

**IP Address:** The numbers here represent the Internal IP address of your DVR. If your DVR is not properly connected to the router, the address will appear as 0.0.0.0 or 192.168.1.100 will be displayed.



### To acquire an IP address:

1. Make sure the DVR's IP mode is set to DHCP.
2. Once adjusted to DHCP, select APPLY to save and exit the menu.
3. Unplug the power cable from the DVR.
4. Connect the included network cable from the back of the DVR to your router.
5. Plug the power cable back into the DVR.
6. Enter the NETWORK tab menu to verify that the IP Address is displayed on the NETWORK tab.

If your IP address changes frequently, changing your network type to STATIC may help to prevent it from changing.

### To set the IP address to STATIC:

1. Write down your IP address found on the NETWORK tab in the IP ADDRESS field.
2. Click the box next to TYPE and select STATIC.
3. Click in the field next to IP ADDRESS and enter your IP address from step 1. Select the ENTER  key.
4. Select APPLY to save your changes.
5. Exit the menu completely to restart the DVR.
6. Go to the MAIN MENU, click NETWORK and confirm that your changes are saved.

**Note:** The internal IP address is the most important number on the Network Setup Menu screen and the Ports will be used to set up Port Forwarding which is necessary for viewing the DVR outside of the current network.

# MAIN MENU

## Gateway:

This is the IP address of your router. If the box is populated with numbers other than all zeros, this is a confirmation that you are connected to the router.

## DNS1 and DNS2:

Stands for Domain Name System and is for advanced network setup. DNS is used to convert common names into website IP Addresses. It is best to leave these settings as it is usually the same as the router.

### **To Change the DNS address:**

1. Highlight and select the starting number next to DNS and a keyboard will appear.
2. Type the number you would like for a DNS address then select the ENTER  key.
3. Select APPLY to save your changes.

## UPNP:

Universal Plug and Play, not applicable.

## SUBSTREAM TAB

These are the resolution settings for viewing your mobile device.

## Video

Enable or disable if the video from that channel can be viewed from a mobile device.

## Frames Per Second (FPS)

The FPS settings are adjustable. A higher FPS will result in smoother and better quality recorded video. A lower FPS will result in a choppy video, however it will use less space on the HDD.

### **To adjust the FRAME RATE of video:**

1. Find the channel that you wish to adjust the FPS.
2. Scroll through the list (1 to 30) and the FPS you wish to record on that channel.
3. Select APPLY to save your settings.

## Bitrate

The bitrate represents the amount of information or detail that is stored per unit of time of a recording. The DVR is set to the recommended 128bps.

## Audio

### **To turn AUDIO RECORDING On or Off:**

1. Check the AUDIO BOX next to the channel you want audio enabled. (Your camera must have audio recording capabilities.)
2. Uncheck the AUDIO BOX next to the channel you want audio disabled.
3. Select APPLY to save settings.

## DDNS TAB

DDNS (Dynamic Domain Name Service) This menu option allows you to set up a common name for the DVR instead of typing in an IP address. This feature is used if you have a Dynamic IP address from your ISP and the IP address is constantly changing.

# MAIN MENU

## To setup your DDNS on the DVR:

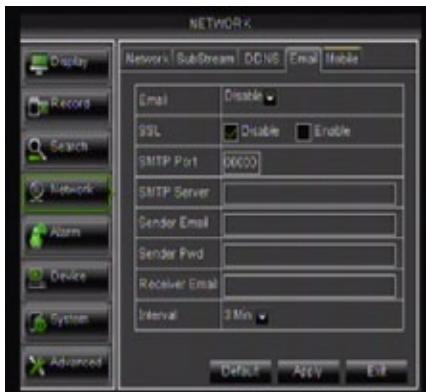
1. Highlight and select DDNS setup.
2. Highlight DDNS and change from DISABLE to ENABLE.
3. Highlight SERVER, this should be set to DynDNS. Choose your DDNS provider from the list.
4. Highlight HOST NAME and press SELECT, the keyboard will appear to input your host name.
5. Highlight USER NAME and press SELECT, the keyboard will appear to input your user name.
6. Highlight PASSWORD and press SELECT, the keyboard will appear to input your password.
7. Once all the proper information is inserted into the boxes, select APPLY to save your settings.

## EMAIL TAB

The EMAIL tab allows you to set up your email so that you can receive notifications, if you wish, for motion detection.

### To set up your email to send notifications:

1. Select the DROP DOWN box next to EMAIL, select ENABLE.
2. Select the ENABLE checkbox next to SSL.
3. Select the SMTP Port and enter the port number provided by your email provider using the keyboard (The port number for most email is 25. Gmail port number is 465).
4. Select the SMTP Server box and INPUT ON THE KEYBOARD the SMTP server address provided by your email provider. (Gmail SMTP address: smtp.gmail.com). Select the ENTER  key.
5. Select the Sender Email box and input the email address in which the email notification will be coming from.
6. Select the Sender Password box and input the password for the sending email account.
7. Select the Receiver Email box and input the email address in which the email notification will be going to.
  - The Sender Email and the Receiver Email can be the same email.
8. Select the Interval drop down box and select (1min, 3min, 5min, 10min) the time interval in which you want to receive emails.
9. Click the EMAIL TEST button at the bottom of the screen to test that emails are sent successfully.



## MOBILE TAB

The DVR is compatible with iPhones®, BlackBerry® Bold, and Android™. The MOBILE tab setup menu allows you to input the user name and password you will be using to view your DVR through your mobile phone. It also allows you to adjust which port your phone will be viewing from. Port forwarding on the router must be configured for this port for mobile viewing to work. **The MOBILE port default setting is 18004.**

- Instructions for viewing your DVR on a mobile phone are in the MOBILE VIEWING-NETWORK SETUP of this manual.
- Software is required to be installed on the mobile device.

# MAIN MENU

**To adjust the user name, password and server port for mobile login:**

1. Select the column next to the setting you would like to change and a keyboard will appear.
2. Type the user name, password and port you would like then select ENTER to close the keyboard. (User name and passwords are case sensitive.)
3. Select APPLY from the main camera menu to save your changes.
4. For more information about mobile setup please see MOBILE VIEWING section.

## ALARM SETUP

The alarm menu allows you to adjust which alarms you would like set and adjust the length of time that the internal buzzer will sound for. This DVR gives you the option to have email alerts sent when motion is detected. To set up email notifications for motion, please see NETWORKING SETUP- EMAIL TAB.

### MOTION TAB

- CH:** The channel you want motion detection.
- Enable:** Enable or disable motion detection.
- Area:** Set up the area to be detected by motion.
- Sensitivity:** Use a range from (1-8) to detect object. 1 being the least sensitive and 8 being the most sensitive.
- Alarm Out:** This DVR does not support this function.
- Alarm Time:** This DVR does not support this function.
- Show Message:** DVR will display a message on screen when motion is detected.
- Buzzer:** Set the length of the buzzer sounding when motion is detected (10s, 20s, 40s, 60s).
- Send Email:** Send an email when motion is detected.
- Full Screen:** When motion is detected on a specific channel, that channel will be switched to full screen mode.
- Record Channel:** The channel will begin recording when motion is detected.
- Post Recording:** Set the record length after motion alarm ends (30s, 1 minute, 2 minutes, 5 minutes).
- Copy:** Copy your current channel settings to other channels on the DVR.



**To change the status of motion detection for each camera:**

1. Select the channel you want to have motion detection enabled on.
2. Select ENABLE next to the camera you would like to turn motion detection on/off.
3. Select the drop down menu next to buzzer to set the length of the buzzer sound.
4. Select the boxes next to Show Message and Send Email if you would like these notifications enabled.
5. Select the channels at the bottom by clicking on them if you would like the channel with motion to be recorded.
6. Select the POST RECORDING drop down box to set up the length of recording after the alarm has ended.
7. Select APPLY to save changes.

# MAIN MENU

## ***Copy settings to other camera channels:***

1. On the channel drop down menu select which settings you want to copy.
2. Select which channels to apply the settings to in the TO drop down box.
3. Click the COPY button.
4. Select APPLY to save changes.

## ***To change the SENSITIVITY of motion detection for each camera:***

1. Select the SENSITIVITY drop down list under the camera you would like to adjust the motion detection sensitivity.
2. Select 1 to 8 from the drop down list to adjust the sensitivity; 1 is the lowest sensitivity and 8 is the highest sensitivity.
3. Adjust the sensitivity for all desired cameras.
4. Select APPLY to save the changes.

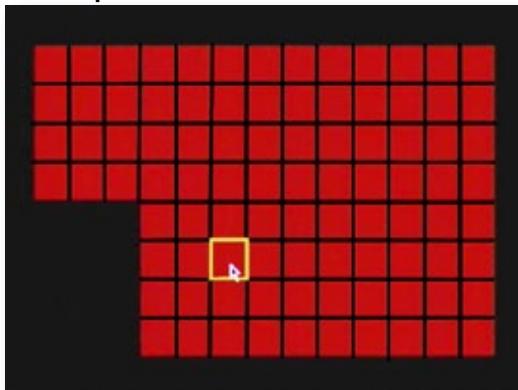
## **Area Setup:**

Area Setup allows you to set up the Motion Detection area. This setting allows you to adjust particular areas of each camera where motion will and will not be detected. This is useful if you have a camera pointed towards something that is always moving, such as a busy road. This way the DVR only records motion that is out of the ordinary, thus saving you HDD space and providing you with more days of recording.

## ***To adjust the AREA setup:***

1. Select the AREA SETUP option under the camera you would like to adjust the motion detection area and a separate screen will appear with a red mask on the picture and a grid.
2. The screen is fully red; this is because the DVR is automatically set to detect motion throughout the whole screen.
3. To adjust the motion detection area, left-click the mouse on the squares that you do NOT want motion detected. The squares that will NOT have motion detected will be black.
4. Right-click the mouse to exit the SETUP screen and click APPLY, to save your settings.

**Area Setup Mask**



# MAIN MENU

## DEVICE SETUP

This menu allows you to select and configure the HDD and PTZ camera (not included).

### HDD TAB

This menu option gives you information about your Hard Disk Drive (HDD), allows you to enable overwrite mode, and format the hard drive and/or USB drive.

#### **Your options are:**

- State:** Displays the current operating status of the hard drive. If the hard drive is functioning normally it will display OK.
- Avail/Total:** Tells you how much HDD space that you have in total and is still available to record.
- Avail Time:** Amount of remaining time available to record.
- Select :** Select which HDD to modify.



### Overwrite

When the overwrite mode is enabled, the DVR will record over the oldest footage once the HDD is full instead of stopping the recording once it is full. Overwriting allows the DVR to never stop recording. If you want to stop recording once the HDD is full, set overwrite to DISABLE.

#### **To enable/disable OVERWRITE :**

1. Select the drop down menu beside OVERWRITE.
2. Select AUTO to turn OVERWRITE on, you can also set the DVR to overwrite after just a few hours or days, or choose DISABLE to turn OVERWRITE off.
3. Select APPLY to save settings.

# MAIN MENU

## Format HDD

Formatting the HDD erases all recorded video and audio on your HDD.

### **To Format the HDD:**

1. Select the box next to the HDD that you want to format.
2. Click the FORMAT HDD button. An alert screen will appear indicating "FORMAT WILL REMOVE ALL DATA FROM HDD".
3. Select OK to format the HDD or CANCEL to prevent formatting.
4. Formatting the HDD may take a few minutes. **Formatting cannot be stopped once it has started.**
5. Once formatting is complete, a screen will appear letting you know that the HDD is formatted successfully.
6. Click OK, exit the menu completely and the DVR will restart automatically.

## Format USB

FORMAT USB erases anything you have stored on your USB device. Before formatting, be sure to connect your USB device to a USB port.

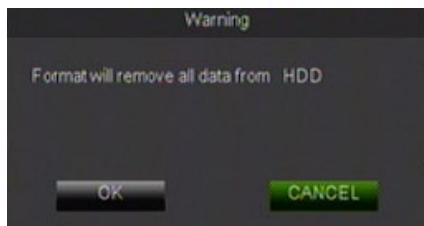
### **To Format the attached USB drive:**

1. Click the FORMAT USB button.
2. A screen will appear advising "FORMAT WILL REMOVE ALL FILES FROM USB".
3. Select OK to format the USB or CANCEL to prevent formatting.
4. It may take a few minutes to format the attached USB. Do not remove the USB drive during this time.
5. Once formatting is complete, a screen will come up and let you know that the USB has formatted successfully.
6. Select OK and you will have successfully formatted the attached USB drive.

### HDD and USB Format buttons



### Warning Screen



## PTZ TAB

PTZ setup allows you to input information for a PTZ camera. (PTZ cameras not included.) The information must be entered into the DVR so that the DVR works with your PTZ camera and all its functions.

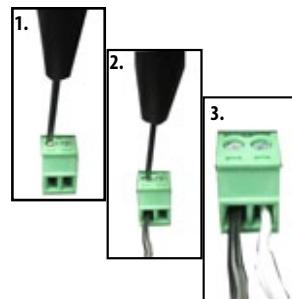
# MAIN MENU

## CONNECTING A PTZ CAMERA

The DVR supports a 2-wire RS-485 connection for a PTZ camera to be connected (PTZ camera not included). Please see your PTZ camera manual for further instructions on required connections and settings.

### To connect a two-wire PTZ camera:

1. With a small flat head screwdriver, unscrew the screw on the top of the opening.
2. Insert the wire into the hole below the top screw while it is still unscrewed.
3. Re-tighten the top screw, to lock the wire into place. Pull lightly on the wire to make sure it is secure.
4. For further instruction on connecting your PTZ camera, please see the PTZ camera's instruction manual.



### To input the PTZ information:

1. Find which camera channel the PTZ camera(s) are hooked up to on the PTZ setup menu. On that channel's row input the proper information for your PTZ camera.
2. The information you need to select will be specified in the PTZ manufacturer's manual.
3. Choose to enable/disable CRUISE MODE for the PTZ camera, once all the correct information is entered into the DVR, select APPLY to save changes.



## SYSTEM SETUP

This menu option allows you to change system settings on your DVR. The settings you can change include:

- **Date and Time:** Adjust date, time and daylight saving time
- **Password:** Turn the password function on/off as well as change the password
- **Language:** Customize and set different languages
- **Info:** Gives you information about the device, software version, and the MAC address
- **Users:** Add different users, set different administrators



# MAIN MENU

## GENERAL TAB

The General Tab allows for you to change the date and time, language, as well as daylight saving time.

### Date and Time

This menu option allows you to set the date and time, to change the format of the displayed date, and time.

#### ***Set the DATE FORMAT:***

1. Select the scroll bar next to DATE FORMAT and a list will appear.
2. Highlight and select your preferred DATE FORMAT.
3. Select APPLY to save your changes.

#### ***Set the DATE:***

1. Click on the DATE box and a keyboard will appear.
2. Enter the date in the order of the selected format, then select the ENTER  key. (i.e. mm/dd/yyyy)
3. Select APPLY to save your changes.

#### ***Set the TIME FORMAT:***

1. Select the scroll bar next to TIME FORMAT and a list will appear.
2. Highlight and select your preferred TIME FORMAT, 12-hour clock or a 24-hour clock.
3. If selecting the 12-hour clock format, a drop down box will appear, select AM or PM.
4. Select APPLY to save your changes.

#### ***Set the TIME:***

1. Click on the TIME box and a keyboard will appear.
2. Enter the time in the order of the selected format then select the ENTER  key. (i.e. 12-hour or 24-hour clock)
3. If selecting the 12-hour clock format, a drop down box will appear, select AM or PM.
4. Select APPLY to save your changes.



# MAIN MENU

## DST (Daylight Saving Time)

You can program the DVR to automatically switch to Daylight Saving Time.

### **To customize the DVR's DAYLIGHT SAVING TIME settings:**

1. Select the the DST SETUP box next to DST.
2. Select the drop down box next to Daylight Saving Time and list will appear. Select ENABLE.
3. Select the drop down box next to TIME OFFSET and select if you would like your clock to go forwards or backwards by 1 hour or 2 hours.
4. Select the drop down box next to DAYLIGHT SAVING TIME Mode to adjust whether you would like DST to change in a specific week or a specific date.

#### By Week

- Select the drop down box next to DAYLIGHT SAVING TIME MODE and select WEEK.
- Select the drop down box next to Start Time and select the month.
- Select the drop down box below and select the week.
- Select the drop down box below and select the weekday.
- Select the box below and input the time for DST to take effect. Select the ENTER ↴ key.
- Repeat steps above for End Time.

#### By Date

- Select the drop down box next to DAYLIGHT SAVING TIME MODE and select DATE.
- Select the box next to Start Time and a keyboard will appear. Input the specific date.
- Select the box below and input the time for DST to take effect. Select the ENTER ↴ key.
- Repeat steps above for End Time.

5. Once your parameters have been set, select APPLY to save your settings.

### DST Options



# MAIN MENU

## Network Time Protocol (NTP)

You have the option of setting your DVR to sync its time to various web servers. This ensures your DVR is set to the correct time. It will also automatically adjust to Daylight Saving Time.

### To set the DVR to sync with an NTP time server:

1. Select NTP SETUP and select ENABLE.
2. Select the Server drop down box and choose one of three time servers.
3. Select the Time Zone drop down box and select your time zone.
4. Select the UPDATE button.
5. Select APPLY to save settings.

### NTP Options



*Note: You must be connected to the internet to synchronize your NTP settings to web servers.*

## Language

This DVR allows you to set many different languages. The languages you have to choose from include: English, French, Russian, Italian, Portuguese, Spanish, and Romanian.

### To adjust the LANGUAGE:

1. Select the drop down menu beside LANGUAGE.
2. Highlight the language you would like and select.
3. Select APPLY to save your settings then exit the menu completely.
4. The system will restart and open with your chosen language settings.

## Video Format

Throughout the world there are two main video systems; NTSC and PAL. NTSC stands for National Television System Committee, and is used in parts of North America and Japan. PAL stands for Phase Altering Line and it is used in European countries. **The DVR is automatically set to NTSC as DEFENDER® distributes DVRs within North America.**

### To change the VIDEO FORMAT:

1. Select the scroll bar next to VIDEO FORMAT and a list will appear.
2. Highlight the video system you would like, either NTSC or PAL.
3. Select APPLY to save your changes. The system will restart.

## Menu Time Out

This allows you to set how long your menu screen is visible during inactivity with the menu.

### To set the MENU TIME OUT:

1. Select the drop down box next to MENU TIME OUT.
2. Select if you would like 1min, 5min, 10min or OFF.
3. Select APPLY to save your changes.

# MAIN MENU

## USERS TAB

The USERS Tab allows for you to setup 7 different users on the DVR. You can also customize their username, password, and permission levels. Permission levels include the ability to change settings, view cameras, and footage.

### Password and Permission Setup

The default username is **admin** and the default password is **123456**.

#### **Setting the ADMIN PASSWORD:**

1. Click the box below SEL in the No. 1 line. It should be set to ADMIN by default.
2. Click the EDIT button and a box will appear.
3. Click the USERNAME box , a keyboard will appear, change the username. Click ENTER once complete.
4. To enable password protection, click the box next to PASSWORD ENABLE and select ENABLE.
5. Click the PASSWORD box , a keyboard will appear, change the password. Click ENTER once complete.
6. Click the CONFIRM box and re-enter your password. Click ENTER once complete.
7. Select APPLY to save your changes.



#### **Enabling USER Profiles:**

1. Click the box below SEL next to one of the Users (No. 2-7).
2. Click the EDIT button and a box will appear.
3. Click the USERNAME box , a keyboard will appear, create/change the username. Click ENTER once complete.
4. To enable password protection, click the box next to PASSWORD ENABLE and select ENABLE.
5. Click the PASSWORD box, create/change the password. Click ENTER once complete.
6. Click the CONFIRM box and re-enter your password. Click ENTER once complete
7. Select APPLY to save your changes.

#### **Enabling User PERMISSION LEVELS:**

1. Click the box below SEL next to one of the Users (No. 2-7).
2. Click the PERMISSION button.
3. Select the boxes beside the permissions you want to allow that user to have access to.
4. Select the boxes next to BACKUP, LIVE, PLAYBACK, and PTZ as well as the camera channels you want to allow that user to have access to.
5. You can also press the ALL button for the user to have all permissions, or CLEAR to delete all of the permissions.
6. Select APPLY to save your changes.

# MAIN MENU

## VERSION TAB

The VERSION tab allows you to view information about your DVR:

- Device Name
- Device ID
- Device Type
- MAC Address
- Software Version
- IE Version
- Hardware Version

## ADVANCED SETUP

### MAINTAIN TAB

The MAINTAIN tab allows you to load system default settings, set up your DVR for automatic maintenance, adjust system reboot, manually reboot the system, as well as update the system with a USB device.

#### **Turning AUTO MAINTENANCE on or off:**

AUTO MAINTENANCE activates the AUTO REBOOT function. You must set a schedule for AUTO REBOOT if selecting ENABLE.

1. Select the drop down box next to AUTO MAINTAIN and select ENABLE.
2. Select APPLY to save your changes.

#### **Auto Reboot**

AUTO MAINTAIN must be enabled before setting the AUTO REBOOT schedule.

#### **Setting AUTO REBOOT:**

1. Select the drop down box next to AUTO REBOOT, and select how often you would like the system to reboot, daily, weekly or monthly.
2. Click the next drop down box to select the day of the week/month you would like the system to reboot.
3. Insert a specific time to reboot in the last box on the right. (Based on a 24 hr clock).
4. Select APPLY to save your changes.

#### **To REBOOT the DVR:**

1. Click the REBOOT button.
2. A screen will appear asking for confirmation to reboot. Select OK to continue or CANCEL to quit.
3. Once prompted to reboot the DVR, the DVR will shut down and restart.

#### **Update**

A system update can be done if there is new software available for your DVR model. **This should only be done if a DEFENDER® representative recommends it.**

#### **To UPDATE system:**

1. Download the upgradefiles from [www.defender-usa.com](http://www.defender-usa.com) and put the files onto your USB flash drive.
2. Insert the USB flash drive into the back of the DVR.
3. Click UPDATE and click OK to confirm. This may take up to 10 minutes.
4. Once the update is complete, your DVR will restart with the new software update.

#### Maintain Tab Screen



# MAIN MENU

## Default Settings

Loading default settings will restore all settings on your DVR to the default settings except for the date and time. The DEFAULT USERNAME is **admin** and the DEFAULT PASSWORD is **123456**.

### To LOAD DEFAULT:

1. Click LOAD DEFAULT, a screen will appear.
2. Click the box for each function that will be restored to default parameters or click ALL to select them all. Click CLEAR to uncheck the boxes.
3. Select APPLY to continue.
4. A screen will appear asking "ALL SETTINGS WILL BE LOST. RETURN TO DEFAULT SETTINGS?".
5. If you want to continue and restore the default settings, select OK, if not, select CANCEL.
6. If you select OK, the DVR will take a few minutes to load the default settings.
7. Once loaded, the DVR will reboot automatically and the factory default settings will be set.

## Shut Down

### To SHUT DOWN the DVR:

1. Click the SHUT DOWN button.
2. A screen will appear asking for confirmation to SHUTDOWN. Select OK to continue or CANCEL to quit.
3. A message "YOU MAY NOW POWER OFF" will appear. You can now UNPLUG the power supply to the DVR.

## EVENTS TAB

The EVENTS tab allows you to choose which alarms you would like set, adjust the length of time the internal buzzer will sound, as well as set email notifications. You can also have email alerts sent when motion is detected.

### Turn on EVENT ALARMS:

1. Click the box next to EVENTTYPE and select the event that you want associated to a notification (HDD Full, Disk Error and Video Loss).
2. Next, click ENABLE to activate the function.

**Alarm Out:** This function is not applicable to this DVR.

**Alarm Time:** This function is not applicable to this DVR.

**Show Message:** When selected, a message will be displayed on your monitor if an event occurs.

**Buzzer:** Emits an audible alert from the DVR when an event has occurred. To set the buzzer length, select the drop down box next to BUZZER and select (10s,20s,40s,60s).

**Send Email:** When selected, an email will be sent to notify you that an event has occurred. Please go to **Email Tab** for instructions on how to set up email notifications.

# PLAYBACK

## PLAYBACK

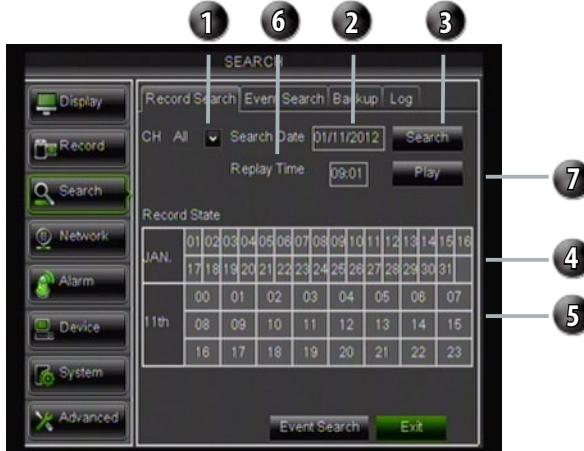
There are two types of files available for playback ; RECORD SEARCH files or EVENT SEARCH files. These searches allow you to find footage recorded from particular dates and times.

***There are three ways to access the SEARCH menu for playback:***

1. Press the PLAY button on the DVR remote.
2. Right click the mouse on the screen and select the RECORD SEARCH icon from the FUNCTION TOOLBAR.
3. Access the MAIN MENU and select SEARCH.

### RECORD SEARCH TAB

Allows you to find recorded footage from particular dates and times.



***To access and playback footage from a particular date and time:***

1. Click on the channel you would like to search (1). Then, enter the date in the SEARCH DATE box (2). Select the ENTER  key. Click the SEARCH button (3) to open up the search times for that date.
  - Once you have searched for a particular month, you can view times and footage from each day of that month by double clicking on the day in the calendar below (4).
  - The days and times that have Motion/Alarm recorded footage stored on them are red in the time schedule (5).
  - The days and times that have Schedule Recording stored on them are green.
  - If the time is not red or green, it means there was no recording during that time.
2. To search for a particular TIME on a set date, select the REPLAY TIME box (6) input the start time of the footage you would like to view. Select the ENTER  key. Click on PLAYBACK (7) to start viewing from that date and time.
3. If footage was recorded within the selected date and time slot, the footage will begin to play. If nothing was recorded, a screen will appear and read "NO RECORD FILE FOUND". Check your Date/Time and try searching to see what video footage is available.

# PLAYBACK

## EVENT SEARCH TAB

This DVR allows you to view the file list for each day that you have recorded footage. The file list allows you to see what the type of recording it was (MOTION DETECTION or SCHEDULED RECORDING), the date and time the footage was recorded, the size of the footage, as well as gives you an option to backup particular recorded events.

### To access the file from the EVENT SEARCH menu:

1. Select a CHANNEL you would like to view footage from.
2. Select the SEARCH DATE box. A keyboard will appear, input the date you would like to retrieve footage from, then Select the ENTER  key.
3. Select SEARCH to open up the available files for that date. The days and times that have recorded footage stored on them are shown in this list.
4. If you would like to filter out the types of recordings on this list, select what type of recording you would like to see from the drop down menu next to the word TYPE. You can view alarm (motion) recordings, normal recordings or all recordings.
5. The list displays the following information (from left to right):

- **CH:** The channel with recorded footage
- **TYPE:** The type of footage that was recorded (MOTION DETECTION or SCHEDULED RECORDING)
- **DATE:** The date that the footage was recorded
- **START:** The start time that the footage was recorded
- **END:** The end time that the footage was recorded
- **SIZE:** The size of the file – the larger the file the longer the video clip
- **BAK:** Allows you to select video clips to backup to a USB device

6. The buttons at the bottom of the list have the following functions:

- **First:** Brings you to the beginning of the list (oldest footage first).
- **Prev:** Brings you back a page.
- **Next:** Brings you forward a page.
- **Last:** Brings you to the last page of recorded footage (most recent footage is last).
- **All:** Selects all footage on the page to be backed up.
- **Inverse:** Deselects the selected and selects non-selected footage for backup.
- **Search:** Opens up the available files for the selected date or time.
- **Backup:** Prompts backup of the selected video clips.
- **Exit:** Exits the file list.

File List Menu



# PLAYBACK

## Playback Screen



## PLAYBACK THROUGH DVR

Click the file you have selected to view, and the footage will automatically play. Upon playing back the recorded footage, options at the bottom of the screen appear to manipulate the video. These options are also available on the remote control.

***The options and their functions are as follows: (from left to right on the screen)***

- Rewind:** Pressing this rewinds the footage, the more times you press this the faster the footage will rewind (x2, x4, x8).
- Slow Forward:** Pressing this button slows down the playback footage. The more times you press this, the slower the video will playback.
- Play:** Plays selected footage.
- Pause/Forward:** Pressing this button once will pause the playback footage. After that, each time you press this button the playback footage will move forward a frame and pause again.
- Fast Forward:** Pressing this fast forwards the footage, the more times you press this the faster the footage will fast forward (x2, x4, x8).
- Mute:** Selecting this option will mute the sound from the playback footage. Sound will only play though if you have an audio-supported camera (not included) hooked up to your DVR.
- Volume Adjust:** Adjusting this bar (from low to high) will adjust the volume of the sound from the playback footage. Sound will only play if you have an audio-supported camera (not included) hooked up to your DVR.
- Exit:** Selecting this option will exit the playback footage and return you to the RECORD SEARCH or EVENT SEARCH option.

# PLAYBACK

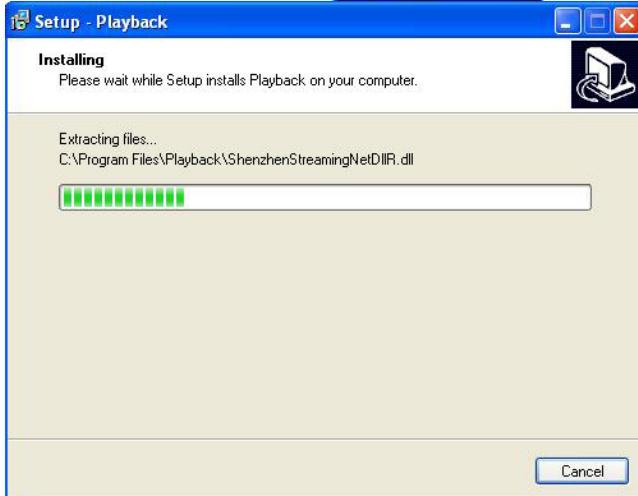
## COMPUTER PLAYBACK

When you backup footage to a USB device, you can view the backed up footage on your computer. Viewing your footage from your computer allows you more options for manipulating the video as well as for backing up footage directly to your computer.

### **To view footage through your computer:**

1. Insert included software CD into disk drive and double click to install the playback software.
2. Follow the installation guide until the end.
3. Once everything has been successfully installed, insert USB device into USB port on computer. Make sure USB device has backed up footage on it.
4. Open the playback software you installed.

### Software Installation



# PLAYBACK

## FILE VIEWING

Be sure that the playback software is open on your computer. Instructions differ depending on what files you would like to open and play:

### **To add one video:**

1. Select  and then FILES. Find the USB device file, or any other area where backed up footage would be stored on your computer.
2. Make sure to view .264 Files.
3. Select the file you would like to view and select OPEN.
4. Once you have selected OPEN, the video will NOT play automatically. You must prompt the video to play.
5. To view the footage you must select play , from the bottom menu. Once play is selected, the video will begin.

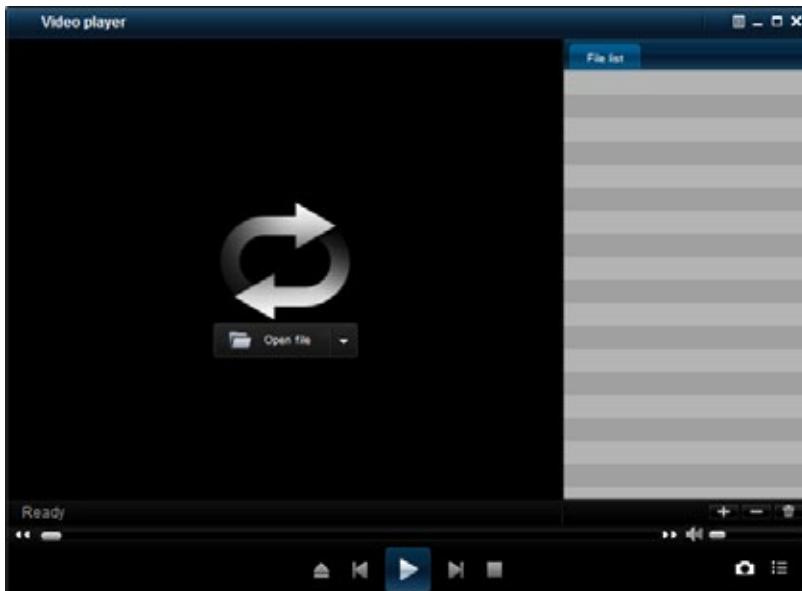
### **To ADD an entire FOLDER:**

1. Select  and select the folder with your footage.
2. Highlight all the files you would like to view and select OPEN.
3. Once you have selected OPEN, the video will play automatically.

### **To REMOVE a file**

1. Select the file you wish to remove from the list and press .
2. You can also clear the entire playlist by pressing .

## Computer Playback Software

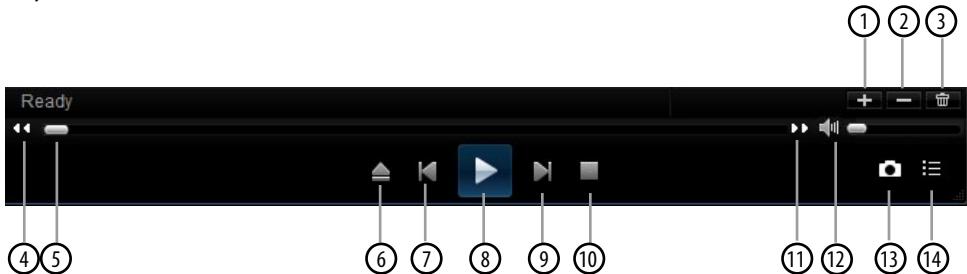


# PLAYBACK

## SOFTWARE FUNCTIONS

The software has many functions. The drop down menus allow you to adjust the video, the file menu allows you to open video files, and settings allows you to adjust certain settings in the software.

### Play Menu



*The video functions from the play menu are as follows:*

- 1. Add Videos:** Add a single video or a folder of multiple videos to the playback list.
- 2. Remove Videos:** Remove a single unwanted video clip from the playback list.
- 3. Clear All:** Clears all videos from the playback list.
- 4. Rewind:** Moves the video backwards.
- 5. Minute Bar:** Shows your progress of time through any footage being played.
- 6. Open:** Opens the last folder you accessed to add videos.
- 7. Backward Frame:** Moves the video backward a frame.
- 8. Play/ Pause:** Pressing PLAY plays the footage. Once PLAY is pressed, the PAUSE **||** button will appear.
- 9. Forward Frame:** Moves the video forward a frame.
- 10. Stop:** Stops the footage.
- 11. Fast Forward:** Slows down video.
- 12. Volume Bar:** Allows you to adjust the volume if you have recorded footage from an audio-enabled camera (not included).
- 13. Capture Picture:** This option takes a photo of the screen. When you select this option, a screenshot of the current video will be saved under a computer directory. The file location will appear beside the capture button.
- 14. Show/ Hide File List:** Displays the video files that have been added to view. Also hides the list.

## REQUIREMENTS

**You will need to have:**

- The DVR connected to a router.**
- The router connected to the Internet.**
- A PC or laptop that is connected to the same router as the DVR. The PC can be connected by a wired or wireless connection.**
- Internet Explorer® (IE) 6.0 or higher (to check your version of Internet Explorer® open IE. In the top Menu bar select HELP and then select ABOUT INTERNET EXPLORER®. The version of IE will be displayed).**
- A genuine and fully-updated version of Windows XP,® Vista® or newer.**



**Note:** *The computer and DVR need to be connected to the same router for initial setup. A computer will not always be necessary at the location to view the DVR.*

## CONNECTING DVR TO A ROUTER

1. Power off the DVR by removing the power cable from the back of the DVR.
2. Connect the included network cable to the back of the DVR in the Ethernet port (LAN).
3. Connect the other end of the network cable to an available port on the router.
4. Power on the DVR by reconnecting the power cable to the back of the DVR.

**LAN Connection**



***Disclaimer: Internet Explorer is a registered trademark of Microsoft Corporation.***

***Windows XP is a registered trademark of Microsoft Corporation.***

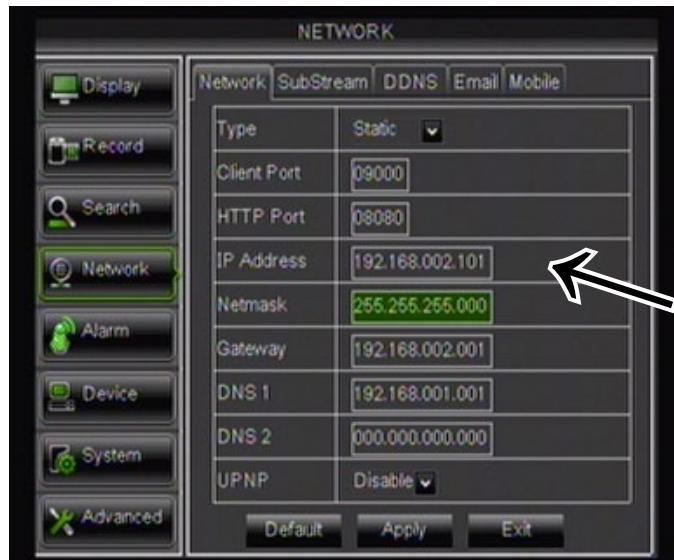
***Vista is a registered trademark of Microsoft Corporation.***

# NETWORK GUIDE

## FINDING YOUR DVR'S IP ADDRESS

By default, the DVR IP mode is set to DHCP. This means the DVR will automatically retrieve an IP address from the router that it is connected to. Unless your network requires a static IP address leave the DVR IP mode set as DHCP.

1. From the MAIN MENU, select NETWORK.
2. Confirm that the IP MODE is set to DHCP. This setting is acceptable for most users.
  - If the IP mode is not set to DHCP, use the drop down list next to TYPE and change the type so that it is set to DHCP. Click APPLY and EXIT to restart the DVR and retrieve an IP address.
3. Write down your IP address, CLIENT PORT, HTTP PORT and GATEWAY. This information will be used in the next few steps to view the DVR on your computer as well as for viewing the DVR over the Internet.



ONCE ACQUIRED,  
YOUR IP ADDRESS  
WILL APPEAR HERE

**Note:** If your router does not support DHCP, contact your network administrator to supply you with the proper IP information. If the DVR needs to store PPPoE (DSL/ADSL) settings contact your ISP (Internet Service Provider) for the proper IP address settings.

## PREPARING YOUR COMPUTER FOR VIEWING THE DVR

Every computer that is accessing the DVR will need to be configured to download and run ActiveX controls. This change only needs to be made one time on the computer that is accessing the DVR. This can be done by performing one of the two following methods. See Viewing your DVR outside your network.

# NETWORK GUIDE

## Method 1:

1. Open up Internet Explorer.
2. Click on TOOLS.
3. Click on INTERNET OPTIONS.
4. Click on the SECURITY tab, then the CUSTOM LEVEL button.



5. Change the ActiveX settings listed below.
  - Download signed ActiveX controls:  
PROMPT or ENABLED
  - Download unsigned ActiveX controls:  
PROMPT
  - Initialize and script ActiveX controls not marked as safe:  
PROMPT
  - Run ActiveX controls and plug-ins:  
ENABLE
  - Script ActiveX controls marked as safe for scripting:  
ENABLE

If this is an option:

- Allow automatic prompting for file and code downloads:  
ENABLE

6. Click OK.
7. Click APPLY.
8. Close the options window.



**Note: This method needs to be done on every computer you wish to view your DVR from.**

# NETWORK GUIDE

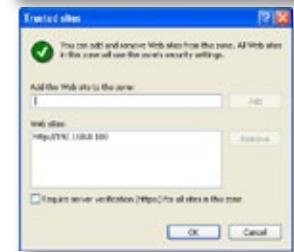
## Method 2:

Add the DVR's IP address to the Trusted Sites in Internet Explorer.

1. Open up Internet Explorer.
2. Click on TOOLS.
3. Click on INTERNET OPTIONS.
4. Click on the SECURITY Tab.
5. Click on TRUSTED SITES.
6. Click on the SITES button.
7. Type in the IP address of the DVR in the following format:  
http://192.168.0.108 and click ADD.
8. If "Require server verification (https:) for all sites ..." is selected you will need to uncheck the selection box.

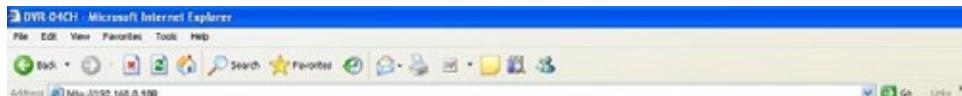
***The IP address used in the example above is for internal network viewing. If you are trying to access the DVR from a remote location you will add the External IP Address to the Trusted Sites list. See Finding your External IP Address***

9. Change the default settings for the TRUSTED SITES zone to low. Click on DEFAULT LEVEL and change the security level of the zone to LOW. This can be done by running the slider to the bottom. This will allow ActiveX controls from the DVR to be downloaded and the DVR to be viewed on the computer.
10. Click APPLY.
11. Click OK.



## VIEWING YOUR DVR ON YOUR COMPUTER

Now that the computer is installed with the necessary ActiveX changes listed above, you are ready to start viewing the DVR using your computer. Open Internet Explorer and type the IP address of the DVR into the address bar using the following format: http://192.168.0.108 then press ENTER.



If the computer and the DVR are connected to the same router you can use the internal IP address to view the DVR. If the computer is not connected to the same router and is at a remote location you will need to use the external IP address of the DVR to view it from that computer.

# NETWORK GUIDE

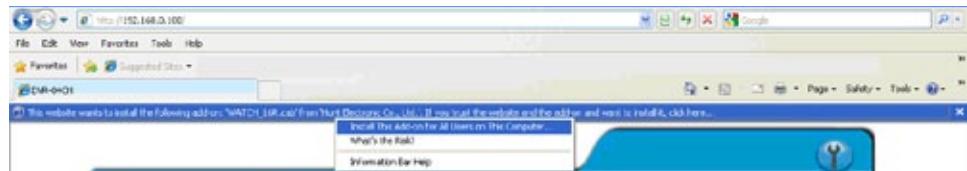
## LOG INTO THE DVR (USING INTERNET EXPLORER):

1. By default the DVR will require a user to input a username and password before being able to view the DVR online.  
**The default username is: admin and the password is: 123456**



## INSTALLING THE ACTIVEX CONTROLS:

2. There will be a yellow information bar that pops up below the address bar in Internet Explorer. Click on the yellow information bar and then select INSTALL THIS ADD-ON FOR ALL USERS ON THIS COMPUTER.... Please be patient as the installation process can take 1-2 minutes.



3. If your ActiveX settings are set correctly you will see the following dialogue box.



4. Click RUN.

Once everything has installed and loaded, you will see the web player and the connected cameras.

# NETWORK GUIDE

## VIEWING YOUR DVR FROM OUTSIDE OF YOUR NETWORK

Now that you have successfully viewed your DVR and cameras from a computer connected to the same router, it is time to set up your router to view the DVR while at a remote location. This process is called PORT FORWARDING and you can find detailed instructions on how to complete the required steps at:

**Option 1** - <http://www.defender-usa.com/network-product.php>

**Option 2** - [www.portforward.com](http://www.portforward.com)

### BEFORE YOU BEGIN PORT FORWARDING YOU WILL NEED:

- The DVR connected to a router.
- Your computer must be connected to the same network/router as the DVR.
- The brand and model number of your router (this is usually located on the back or bottom of the router).
- Internet Explorer® 6.0 or higher.
- The Internal IP address of your DVR and the GATEWAY number.
- The CLIENT PORT and HTTP PORT numbers that the DVR is programmed to use. To view which ports are being used with your DVR, see the NETWORK menu on your DVR.

**Note:** *Port forwarding is required if you want to view the DVR from a computer that is not connected to the same router.*



# NETWORK GUIDE

## OPTION 1 (RECOMMENDED):

This option gives you an audio-enabled video that has step-by-step instructions on how to port forward your DVR for your specific router.

1. Open up your web browser and go to: [www.defender-usa.com/network](http://www.defender-usa.com/network)
2. Once the site has loaded you will see a list with photos of different DEFENDER® DVR models. Select your model.
3. You will then see a list with photos of different types of routers. Select the router most similar to yours.
4. Once selected, another program will appear in a separate screen. Select the GET STARTED icon in the bottom left corner.
5. Make sure the volume is at a reasonable listening level on your computer and follow the instructions given in the pop-up window.
6. Once you have completed port forwarding, see TESTING PORT FORWARDING.

### Select your DVR



### Select your Router Model



### Follow Instructional Video



**PLEASE MAKE SURE TO FORWARD PORT 80 AND 9000 FOR ONLINE VIEWING. IF YOU WOULD LIKE TO USE MOBILE VIEWING, BE SURE TO FORWARD PORT 18004 AS WELL.**

# NETWORK GUIDE

## **OPTION 2:**

1. Open up your web browser and go to: [www.portforward.com](http://www.portforward.com)
2. Once the site has loaded, scroll down to the large list of routers.
3. Find the type of router you have and select it.
  - If you cannot find your exact router, select one that is similar to your router or made by the same company.
4. Once you select a router an advertisement will appear – select the **CLICK HERE TO SKIP THIS ADVERTISEMENT** text in the top right corner.
5. On the next page there is a list of programs that require port forwarding. Try to find instructions on port forwarding a DVR for your system. If you cannot find any, select any type of system as the instructions for port forwarding are similar for all products or the default guide.
6. Follow the step-by-step instructions for your router on [www.portforward.com](http://www.portforward.com). Be sure to use the set ports on the DVR (Default = Port 80 and 9000 and 18004 for mobile viewing).
  - The instructions will walk you through the port forwarding process from start to finish. Your router may require a username and password. If you do not know this, you may have to contact your Internet service provider.
7. Once you have completed port forwarding, see **TESTING PORT FORWARDING**.

**Go to [www.portforward.com](http://www.portforward.com)**



## Port Forward Homepage



**Select a Router most similar to yours from list**



***NOTE: www.portforward.com is not affiliated with DEFENDER®.***

**PLEASE BE SURE TO PORT FORWARD PORT 80 AND 9000 FOR ONLINE VIEWING.  
FOR MOBILE VIEWING, BE SURE TO PORT FORWARD PORT 18004.**

# NETWORK GUIDE

## TESTING PORT FORWARDING

To confirm that your port forwarding is successful, follow these steps :

1. Open a web browser and type in [www.whatismyip.org](http://www.whatismyip.org)
2. Your External IP address will be listed on the top center of the screen. Be sure to write it down. This is the address that you will use to connect to your DVR when you are not at the DVR location.
3. Open another web browser.
4. Type in [www.canuseeme.org](http://www.canuseeme.org). This site also allows you to see your external IP address.
5. You will see your external IP address and underneath it you will see a box saying WHAT PORT?
6. In the box, put the port numbers you set the DVR to. The default ports are 80 and 9000 (This is to confirm that your PORT FORWARDING is successful.)
7. Click the CHECK button and scroll down.
8. You will see a message that tells you it can successfully see your port. This means you have successfully port forwarded.
9. If you receive an error message please refer to IF YOU CANNOT CONNECT in this manual . If you're still having difficulty connecting you can always contact DEFENDER®'s support team.

## Write down your external IP address



## Type in the port you forwarded (Default port is 80)



**NOTE:** [www.whatismyip.org](http://www.whatismyip.org) and [www.canuseeme.org](http://www.canuseeme.org) are not affiliated with DEFENDER® in any way.

# NETWORK GUIDE

## If You CANNOT Connect

*If the remote viewing does NOT connect, please check the settings below:*

1. Make sure the browser is Internet Explorer 6.0 or higher and is on a Windows PC.
2. Make sure you forwarded both port 80 AND 9000 for TCP and UDP.
3. Make sure all controls are properly installed .(Selected the yellow pop-up bar and run all controls.)
4. Check all your network connections and go through the above steps again to make sure a configuration error was not made. You may have to configure PPPoE settings to match the settings provided to you by your Internet Service Provider (ISP). Consult your ISP for more information on your PPPoE settings.
5. Port forwarding is not set up correctly. Read the instructions of [www.defender-usa.com/network](http://www.defender-usa.com/network) and/or [www.portforward.com](http://www.portforward.com) to ensure you have the correct port forwarding settings.
6. A pop-up blocker is preventing the ActiveX controls from prompting you to install.
7. Your router is blocking your computer from using the External IP address from the same network as the DVR. Try connecting to the External IP Address from a computer that is not connected to the same network.
8. Port 80 is being blocked by your ISP. Try changing the HTTP port to 2000. Port forwarding will need to be set up for the new port.
9. A DSL modem is preventing the connection because it is on a different sub-network. Contact your Internet service provider to assist with bridging the modem and router together.

### Error / Page cannot be displayed



**NOTE: For Port Forwarding issues, please contact DEFENDER®'s technical support team. For issues regarding your modem, please contact your Internet service provider, as making any modifications to your modem can render it inoperable.**

# NETWORK GUIDE

## To View Online Software Using External IP Address

1. From your computer at the DVR's location, open Internet Explorer and type in [www.whatismyip.org](http://www.whatismyip.org) and press ENTER. This will direct you to a website that lists your external IP address on the top of the page. Write down your external IP address.
2. From a computer outside of your DVR's network, open Internet Explorer and type in your external IP address, followed by the port you forwarded for your DVR in the following format: `http://74.123.3.34:80`.
3. Follow the login screen for your DVR. The default username is **admin** and the password is **123456**.
4. Install any ActiveX controls or software settings that may appear.
5. Once everything is properly installed, you will be viewing the online software. Please refer to ONLINE SOFTWARE in this manual.

## DDNS (DYNAMIC DNS) SETUP

Instead of having to type in the IP address to access the DVR online, you can use DDNS to create an easy-to-remember website name. The DVR has a DDNS provider web address built into it.

### **To Configure the DVR to Work with DDNS:**

1. Access the MAIN MENU and select NETWORK.
2. Click on the DDNS tab.
3. For complete instructions on setting up DDNS, please see DDNS TAB in this manual.

**Fill out DDNS setup with account information**

The screenshot shows a configuration window titled "DDNS SETUP". It contains five input fields: "Enable" (set to "Enable"), "Server" (set to "DYNDNS"), "Hostname" (highlighted with a blue background), and two empty fields for "Username" and "Password". At the bottom are three buttons: "Default", "Apply", and "Exit".

# NETWORK GUIDE

## LOGGING INTO SOFTWARE

1. If you created a DDNS account, type in your account's host name in the Internet Explorer address bar. If you didn't create an account, you can use your external IP address (if on a different computer) or your DVR's internal IP address (if on a computer connected to the same router).
2. Before you view the online software you are asked to login with a password. You can either use the **admin** or your own user password and the footage will appear.
3. The login screen also has the option to adjust which connection you are viewing the software with (internet or LAN). Leave this option set to Internet.
4. **Default username: Admin and Default Password:123456**
5. Once the password is inserted, select LOGIN and the DVR software and footage will appear.

*Note: If using a port other than 80, the port must be specified after your IP Address.  
For example: 73.38.91.131:2000*



# ONLINE SOFTWARE

## LIVE MODE

The LIVE tab at the top of the online viewing screen allows you to view the DVR in LIVE mode. In LIVE mode, the available functions on the right are:

- PTZ Camera Controls:** Selecting this function opens up PTZ control menu. For more information refer to PTZ options in this manual .
- Cruise Setup:** This function allows you to set up directions for the PTZ to follow. The PTZ camera will cruise through your set positions and times. Not all PTZ cameras have this function. For more information refer to PTZ options in this manual.
- Record:** Records footage directly to your computer. Press the record button again to stop. To select a save location refer to SETTINGS in this manual.
- Capture:** Takes a snapshot of the screen and automatically save the picture to the selected location on your computer. To select a location refer to SETTINGS in this manual.
- Open and Close All Live Channels:** Allows you to view or stop all live feed from showing.
- Display Previous and Next Channels:** Cycle through and view 8 or 16 cameras in quad screen mode.
- Widescreen View:** Expands the camera screen you have highlighted.
- Channel Display:** Provides different options for displaying the cameras.
- Single Channel and Quad Screen View:** View your cameras in one single view or four seperate views.

- Volume Control:** Controls the volume if an audio-supported camera or microphone is connected (not included).

Dragging the mouse across the volume bar adjusts the volume up and down. To mute, select the speaker icon.



# ONLINE SOFTWARE

## PTZ OPTIONS

**The PTZ camera controls are:**

**Zoom:** Pressing the + zooms in and pressing the – zooms out.

**Focus:** Pressing the + focuses the picture and pressing the – takes the focus away. Many PTZ cameras do this automatically.

**Iris:** Pressing the + lets in more light and pressing the – takes light out of the picture. Many PTZ cameras do this automatically.

**Directional Keys:** Clicking on the directional arrows moves the camera around.

**Speed Bar:** Located above the zoom buttons, the SPEED bar sets the speed in which your PTZ camera moves at.

**PTZ Display Settings:** Adjust the PTZ camera's video hue, brightness, contrast, and saturation.

**Default:** To restore all default settings.

**To set up cruise:**

1. Move the camera view to the places you would like the PTZ camera to cruise to and click the + button at each desired position.
2. If you select the – button, the set position will be cleared.
3. To start the PTZ cruise select the arrow next to CRUISE, to stop the PTZ select the square next to CRUISE.



## OTHER MOUSE OPTIONS

When you right click the mouse, a separate menu appears and allows you to perform the following functions:

- Open or close individual windows:** Click on the screen you would like to open/close. It should have a green box around it then right click your mouse and select OPEN/CLOSE window.
- You can also open/close all screens:** Right click and select from MAIN MENU.
- Start recording:** Right click and select from MAIN MENU.
- Stop recording:** Right click and select from MAIN MENU.

# ONLINE SOFTWARE

## PLAYBACK

This tab allows you to search, view and backup previously recorded footage that is stored on your DVR's HDD. You can also narrow down your search by type of footage and what camera it was recorded from.



### To **SEARCH** your footage:

1. The DVR menu cannot be accessed by two people using the same Administrator using the same username and password . If the DVR's menu is being accessed by another Administrator (using the same username and password), you will be unable to retrieve or view footage. Authorized user access will not affect menu access at the same time as the Administrator.
2. Select the date you would like to view the footage from the calendar by clicking on the date. If the date has available footage, it will be in bold. Click SEARCH.
3. It may take a few moments to load the available footage. The footage will appear in the space below the calendar.
4. The list will display the footage in the following format:
  - The time the footage was recorded, and the channel the footage was recorded on.
5. Select the channel screen you would like to view and press PLAY at the bottom of the screen.

### Narrowing your Video Search:

1. Using the scroll lists located under the calendar, select the camera and type of footage you would like to search.
2. Select SEARCH and only the type of footage from the camera selected will be displayed in the list below.

# ONLINE SOFTWARE

## PLAYING BACK FOOTAGE:

When you press play, it may take a few minutes to load. The footage will begin playing automatically. The playback options are located at the bottom of the screen.

***The PLAYBACK options (from left to right on the screen) are as follows:***



**Play:** Pauses playback.



**Pause:** Prompt the video to begin playing.



**Stop:** Pressing this will stop the footage from playing and a blank screen will appear. Pressing play after you have stopped the footage will play the selected footage from the beginning.



**F.F.:** Fast forward. Fast forwards through the footage. The more times you select this, the faster the footage will fast forward (2x, 4x, 8x, 16x).



**Rewind:** Rewinds the footage. The more times you select this, the faster the footage will rewind (2x, 4x, 8x, 16x).



**Next Frame:** Moves the footage forward a single frame.



**Volume:** If you have an audio-supported camera (not included) connected, clicking and dragging this will increase or decrease the volume of the playback footage.



**Download:** Downloads the selected video to your computer. The backed up footage will automatically save to the selected location on your computer. To select a location see SETTINGS information in this manual.

# ONLINE SOFTWARE



**Video Clips:** Displays specific portions of a file. Click the icon to begin. Select again to stop. The file will be saved in the location that you set.



**Capture:** Takes pictures of specific portions of a file. Select the save location in local settings.



**Start All Playback:** Starts playing all channels that have recordings.



**Stop All Playback:** Stops playing all channels that have recordings.



**Stop All Menu:** Stops all playback, stops all downloads, and stops all windows.



**Single CH View:** Select to view one channel.



**Quad Screen View:** Select to view 4 channels at once.



**Widescreen View:** Switches the footage to widescreen format.

# ONLINE SOFTWARE

## REMOTE SETTINGS - ONLINE SETUP

The REMOTE SETTINGS tab allows you to make some adjustments to certain DVR settings. The menu options that can be adjusted include:

- Alarm Parameters
- PTZ Parameters
- Network Parameters
- Device Parameters
- Device Management
- Local Settings

Each function works much like the MAIN MENU options on the DVR.

### DISPLAY

You can adjust the display name, the position, as well as the record time. You can also enable and set up a privacy zone.

#### Live

##### ***Changing the camera NAME:***

1. Select the camera next to CHANNEL.
2. Click the NAME box and a keyboard will appear.
3. Enter the NAME of the camera then select ENTER to close the keyboard.
3. Select SAVE in the upper right corner to save your changes.
4. Repeat the steps above for all desired cameras.

##### **Live Display Setup**



##### ***Changing the title POSITION:***

1. Click the box next to POSITION and a drop down list will open.
2. Select the position of the NAME on the camera screen. If you do NOT want the name to be displayed, set the position to OFF.
3. Select SAVE in the upper right corner to save your changes.
4. Repeat for all desired cameras.

# ONLINE SOFTWARE

## **To turn the *LIVE VIEWING* of a camera on or off:**

1. Select the channel you would like to view live.
2. Click the box next to COVERT.
3. Select ENABLE to turn on the camera or DISABLE turn off the camera.
4. Repeat for all desired cameras.
5. Select SAVE in the upper right corner to save your changes.

## **To turn *SHOW TIME* display or *RECORD TIME* display off or on:**

1. Select the SHOW TIME option or RECORD TIME option and choose either ENABLE or DISABLE .
2. The time display will now be changed.
3. Select SAVE to save settings.

## Privacy Zone

### **To set the *PRIVACY ZONES*:**

1. Select the camera next to CHANNEL.
2. Click the PRIVACY ZONE checkbox.
3. Click and drag the boxes around the screen to place them where you need privacy zones. These boxes will turn RED.
4. Select SAVE in the upper right corner to save your changes.
5. Repeat for all desired cameras.

## Privacy Zone



### **To delete the *PRIVACY ZONES*:**

1. Click the RED PRIVACY ZONE.
2. Select the DELETE button below the black screen.
3. Press the SAVE button to save your changes.

### **To copy your settings to another day:**

1. Click the COPY button. A box will appear at the bottom.
2. Select the channels you want to copy the settings to.
3. Click the checkbox next to all or each individual channel.
4. Click the COPY button and the copied schedule will appear on the selected channels.
5. Once you have completed all of your schedules, select SAVE to save your settings.

# ONLINE SOFTWARE

## RECORD

The RECORD option allows you to record from your computer. Here you can set which channel to record as well as set up a recording schedule and recording resolutions.

### Rec. Parameters

**To adjust the DVR record parameters:**

1. Select the REC PARAMETERS tab.
2. Choose the channel you wish to record using the drop down box.
3. Select SAVE to save settings.

### Schedule

**To set your RECORD SCHEDULE:**

1. Select the SCHEDULE tab.
2. The top row represents SCHEDULED RECORDING. The bottom row represents MOTION RECORDING.
3. Select the DAY of the week on which you want to schedule a recording.
4. Each box corresponds to an hour. Click the boxes for the times that you wish to record in the row that corresponds to the type of recording that you have selected.
5. Select SAVE to save settings.

### Record Schedule



**To copy one day's schedule to another day:**

1. Select the drop down menu beside COPY and highlight the day you want copied.
2. Select the drop down menu beside TO and highlight the day you want the copied schedule to be pasted into.
3. Press the COPY button and the copied schedule will appear in the selected days.
4. Once you have completed all desired schedules, select SAVE to save settings.

### Mainstream

**To adjust the recording RESOLUTION parameters:**

1. Select the MAINSTREAM tab.
2. Select the drop down menus to adjust the frame rate, video quality, and resolution values.
3. Select SAVE to save settings.

### Record Resolutions



# ONLINE SOFTWARE

## NETWORK

The NETWORK tab is your gateway to viewing your footage online and contains the DVR information you need to set up online viewing. Since you have already set up your networking viewing, the NETWORK menu can be used for reference purposes. The options and selections in this NETWORK menu are the same as the settings on your DVR. For more networking information see the NETWORKING GUIDE in this manual.

### **Basic NETWORK settings:**

Used as a reference as you have already set these parameters with the DVR. Here you can view the NETWORKING TYPE, IP ADDRESS and ROUTER INFORMATION.

## DDNS

### **DDNS settings:**

1. To set DDNS protection on your DVR feed, enter a USERNAME and PASSWORD in this menu.
2. Select SAVE to save settings.

## Mobile

### **MOBILE settings:**

You can view your footage from your smartphone. In the MOBILE menu, you can assign a username and password to protect your video feed.

1. Enter in a USERNAME and PASSWORD to protect your video feed.
2. It is necessary to assign a different port for the mobile stream to be transferred. Port 18004 is a good port to use.
3. Select SAVE to save settings.

### **Mobile Settings**



## Substream

### **To adjust the SUBSTREAM resolution parameters:**

1. Select the SUBSTREAM tab.
2. Select the drop down menus to adjust the frame rate, video quality, and resolution values.
3. Select SAVE to save settings.

### **Substream Settings**



# ONLINE SOFTWARE

## Email

### To receive EMAIL notifications:

1. Select the drop down box next to EMAIL, select ENABLE.
2. Select the ENABLE drop down box next to SSL.
4. Select the SMTP Port and input the port number provided by your email provider using the keyboard. (For emails the port number is 25. The Gmail port number is 465).
3. Select the SMTP Server box and input the SMTP server address provided by your email provider using the keyboard. (Gmail SMTP address: smtp.gmail.com).
4. Select the SENDER EMAIL box and input the email in which the email notification will be coming from.
5. Select the SENDER PASSWORD box and input the password for the sending email account.
6. Select the RECEIVER EMAIL box and input the email in which the email notification will be going to.
  - The SENDER EMAIL and the RECEIVER EMAIL can be the same email.
7. Select the INTERVAL drop down box and select the TIME INTERVAL in which you want to receive emails (1min, 3min, 5min, 10min).

## Alarm (Motion)

Enable or disable motion detection, adjust the motion detection area as well as enable the alarm and the length of it.

## Motion

### To enable/disable the status of MOTION DETECTION for each camera:

1. Click the drop down list next to Channel and select the camera you wish to make changes to.
2. Select the ENABLE checkbox to turn the motion detection on for that camera.
3. Select the SENSITIVITY drop down list to adjust the motion detection sensitivity. Select 1 to 8 from the drop down list to adjust the sensitivity. 1 being the lowest sensitivity and 8 being the highest sensitivity.
4. Select SAVE to save the changes.
5. Repeat for all desired cameras.

### To set the MOTION DETECTION area

1. The screen is fully RED; this is because the DVR is automatically set to detect motion throughout the whole screen.
2. To adjust the MD area for the desired cameras, highlight the squares where you do NOT want motion detected and click the mouse. When the area is no longer shaded in red, the area will no longer detect motion.
3. Select SAVE to save settings.



# ONLINE SOFTWARE

## DEVICE

The DEVICE tab allows you to view hard drive information such as HDD status and available space. You can also set the overwrite setting. This is a useful menu when troubleshooting your DVR.

### HDD

#### ***HDD options are:***

- **HDD Status:** Displays the current operating status of the hard drive. If the hard drive is functioning normally it will display OK.
- **Avail Space:** Tells you how much space is available to record on the HDD.
- **Total Space:** Tells you the total amount of space on your HDD.
- **Available Time:** Amount of remaining time available to record.

#### ***Overwrite***

When the HDD has overwrite enabled, it will record over the oldest footage once the HDD is full instead of stopping the recording. This way the DVR is always recording. If you want to stop recording when the HDD is full, set overwrite to Close.

#### ***To enable/disable OVERWRITE mode:***

1. Select the drop down menu beside OVERWRITE.
2. Select either AUTO to turn overwrite on, (you can also set the DVR to overwrite for just a few hours or days) or choose CLOSE to turn overwrite off.
3. Select SAVE to save settings.

## PTZ

PTZ setup allows you to input information for a PTZ camera. (PTZ cameras not included). The information must be entered in the DVR to ensure compatibility with your PTZ camera.

#### ***To input the PTZ information:***

1. On the PTZ setup menu, select the channel the PTZ camera(s) are connected to. Input the proper information for your PTZ camera.
2. The information you need to select will be specified in the PTZ manufacturer manual.
3. Choose to enable/disable cruise mode for the PTZ camera. Once all the correct information is entered into the DVR, select SAVE to save settings.

# ONLINE SOFTWARE

## SYSTEM

The SYSTEM tab allows you to view your device name and serial number, as well as the hardware and software versions. This is a useful menu when troubleshooting your DVR.

### General

This menu option allows you to adjust the date and time, change the format of the displayed date, adjust the time format, set time zones and adjust the DVR for daylight saving time.

#### ***To adjust the DATE FORMAT:***

1. Select the scroll bar next to DATE FORMAT and a list will appear.
2. Highlight and select the type of date format you would like.
3. Select SAVE to save your changes.

#### ***To adjust the DATE:***

1. Select the box next to the date you would like to change and a keyboard will appear.
2. Type the date in the order of the selected format (listed above time format) then select ENTER to close the keyboard.
3. Select SAVE to save your changes.

#### ***To adjust the TIME FORMAT:***

1. Select the scroll bar next to TIME FORMAT and a list will appear.
2. Highlight and select the type of time format you would like. Choose between a 12-hour clock or a 24-hour clock.
3. Select SAVE to save your changes.

#### ***To adjust the TIME:***

1. Select the column next to the time you would like to change and a keyboard will appear.
2. Type the time in the order of the selected format (listed below date format) then select ENTER to close the keyboard.
3. Select SAVE to save your changes.

#### ***To adjust the LANGUAGE:***

1. Select the drop down menu beside LANGUAGE.
2. Highlight the language you would like and select.
3. Select SAVE to save your settings and exit the menu.
4. The system will restart and open with your set language settings.

#### ***To change the VIDEO FORMAT:***

1. Select the drop down bar next to VIDEO SYSTEM and list will appear.
2. Highlight the video system you would like, NTSC or PAL.
3. Select SAVE to save your changes. The system will restart.

# ONLINE SOFTWARE

## DST

DST stands for Daylight Saving Time. You can adjust the DVR to change its time for you when daylight saving time approaches, so you don't have to go back and do it yourself. You can also customize when the DVR changes for DST.

### To turn the DVR DST on:

1. Select the checkbox next to DST and a box will appear.
2. Select the checkbox next to DAYLIGHT SAVING TIME to enable.
3. Select the drop down box next to TIME OFFSET and select if you would like your clock to go forwards or backwards by 1 or 2 hours.
4. Select the drop down box next to DAYLIGHT SAVING TIME MODE to adjust whether you would like DST to change in a specific month and week or a specific date.

#### If by Week

- Select the drop down box next to START TIME and select the month.
- Select the drop down box below and select the WEEK.
- Select the drop down box below and select the WEEKDAY.
- Repeat above steps for End Time.

#### If by Date

- Select the box next to START TIME and input the specific date. A keyboard will appear.
- Select the box below and input the TIME you want the DST to change.
- Repeat above steps for END TIME.

5. Once everything has been adjusted to your liking, select SAVE to save your settings.

## (NTP) Network Time Protocol

You have the option of setting your DVR to sync its time to various web servers. This ensures your DVR always has the correct time. It will also automatically adjust for daylight saving time.

### To set the DVR to sync with an NTP time server:

1. Select NTP SETUP. Select ENABLE or DISABLE.
2. The NTP server options will come up. Choose one of three time servers.
3. Select the server drop down box and select a SERVER.
4. Select the TIME ZONE drop down box and select your time zone.
5. Select the UPDATE NOW button.
6. Select SAVE to save settings.



# ONLINE SOFTWARE

## Users

The USERS tab allows you to customize passwords and set different authority levels for other users.

### Authority settings:

1. Select the USERNAME you wish to change settings for.
2. The password status and information will come up under the list.
3. Here you can enable users and customize the type of authority they are allowed to access.

### Authority Screen

The screenshot shows a software interface titled "Authority Screen". On the left is a sidebar with icons for Display, Record, Network, Alarm, Device, and System. Below these are "General" and "Advanced" buttons. The main area has tabs for User, Playlist, Remote Setting, Local Setting, and Logout. The "User" tab is selected. A table titled "Users" lists 7 entries. Each entry includes checkboxes for "Local Search", "Parameter", "Motion", "Local Logon", "MQTT Control", and "Recorded Record". The first user, "admin", is highlighted in green. The last user, "user7", has "Enable" checked in the "Advanced" section. At the bottom, there are checkboxes for "User Logon" (with options 1, 2, 3, 4), "Local" (with options 1, 2, 3, 4), "Parameter" (with options 1, 2, 3, 4), and "MQTT Control" (with options 1, 2, 3, 4).

### To change the password:

You have the option to change the password for the user and the administrator. A USER will only be able to access the search menu to view saved footage, while the administrator has unlimited access.

**BOTH DEFAULT PASSWORDS ARE 123456.**

1. Highlight and click the USER you wish to change the password for.
2. Make sure PASSWORD ENABLE is set to ENABLE.
3. Type the password you would like in the box next to PASSWORD.
4. Type in the same password again next to CONFIRM to confirm the password.
5. Once you have input the passwords, select SAVE to save your changes.

## Info

The INFO tab allows you to view information about your DVR. The selections are:

- Device Name
- Device ID
- Device Type
- MAC Address
- Currently installed software version
- IE Version
- Hardware Version
- Keyboard Version

The screenshot shows a software interface titled "Info". On the left is a sidebar with icons for Display, Record, Network, Alarm, Device, and System. Below these are "General" and "Advanced" buttons. The main area has tabs for User, Playlist, Remote Setting, Local Setting, and Logout. The "User" tab is selected. A table titled "Info" displays device details. The "Device Name" is "DVR-45F", "Device ID" is "00000000", "Device Type" is "DVR-45F", "Hardware version" is "DVR-PI29", "Software Version" is "V3.0.20110809", "IE Client Version" is "3.1.0.00000", and "MAC Address" is "00-11-02-03-44-01".

# ONLINE SOFTWARE

## ADVANCED

Adjust the device alarms for disk errors, video loss, or when your HDD is full.

### Events

#### ***To enable ALARM settings:***

1. Select the drop down menus to select whether the DVR alarm will sound when the HDD is low on memory or is not working properly or if there is video loss.
2. Select the ENABLE checkbox to turn on the alarm for the specific issue.
3. Select the drop down box next to BUZZER to select the buzzer length.
4. Select the SHOW MESSAGE checkbox if you would like a message to be displayed on your monitor when motion has been detected.
5. Select the SEND EMAIL checkbox if you would like an email alert when motion is detected. You must have email notification set up to receive alerts.
6. Select SAVE to save settings.

### Maintain

#### ***To turn AUTO MAINTENANCE on or off:***

1. Select the MAINTAIN tab.
2. Select the drop down box next to AUTO REBOOT and select Enable or Disable.
3. Input the date and time with the drop down boxes when you would like the reboot to happen.
4. Select SAVE to save your changes.

### Load Default

Loading default settings will restore all settings on your DVR to the default settings except your passwords and time adjustments.

1. Highlight and select LOAD DEFAULT.
2. Check the boxes where you would like the settings restored.
3. A screen will appear asking "ARE SURE YOU WANT TO RESTORE THE DVR TO THE DEFAULT SETTINGS".
4. Once loaded, the factory default settings will be set.

### Firmware Update

1. Highlight and select FIRMWARE UPDATE.
2. Select the path to where you have saved the firmware once downloaded.
3. Select the START button.

# ONLINE SOFTWARE

## LOCAL SETTINGS

### Save Paths

You can select where to save the files you capture, record and back up on your computer.

**To change where the files are saved:**

1. Click the (...) box next to the RECORD PATH area and a folder browse screen will appear.
2. Find the location you want the files to be saved to and double click the area.
3. Select OK.
4. The file you want the footage/pictures saved to will appear in the box.
5. Select SAVE to save settings.



## LOGOUT

Clicking on the LOGOUT tab logs you out of the online software and DVR viewing. When this tab is clicked, the software will shut down, the screen will refresh and return to the initial user login screen.

### User Login Screen

A screenshot of the 'User Login' screen. It features a title 'User Login' at the top. Below it are five input fields: 'IP Address' (72.38.91.131), 'Media Port' (9000), 'User Name' (empty), 'Password' (empty), and 'Network' (set to 'Internet' with a dropdown arrow). There is also a checked checkbox for 'Open All Channels Preview'. At the bottom are 'Login' and 'Reset' buttons.

# ONLINE SOFTWARE

## MOBILE VIEWING

This DVR is compatible with iPhone®, BlackBerry®, and Android™ operating systems on 3G networks. Before you can access your DVR on a mobile phone you must make sure that the DVR has the proper network settings, has been port forwarded, and that you have the proper viewing software on your phone.

### ***Set username, password and port on DVR:***

1. From the MAINTAIN MENU, select NETWORK then click the MOBILE tab.
2. Insert the USERNAME and PASSWORD which a mobile user would use to access the DVR footage.
3. Insert a port for the mobile footage to run from. Port 18004 is a good default port to use. Make sure that you port forward this port on top of the other two ports.
4. Select APPLY to save your settings.

## PORT FORWARDING:

Follow the port forwarding instructions found in the PORT FORWARDING section of this manual and use the port assigned in mobile viewing setup screen. **Be sure to forward the MOBILE PORT 18004 IN ADDITION to ports 80 and 9000.**

## IPHONE® VIEWING

Before viewing your DVR footage from your iPhone®, please ensure that you have iTunes® set up on your computer with an activated account and that you have port forwarded an extra port for mobile viewing.

### ***Download from App Store:***

1. Open App Store.
2. Select the search icon at the bottom of the screen. Search Asee.
3. Select the Asee application, then Install.
4. Once application has downloaded, it will appear on your iPhone® screen.

### ***From your computer or iPhone®:***

1. Open your iTunes® program and access the iTunes® store.
2. From the iTunes® store, search Asee. The Asee application will then appear.
3. Click on the application, open the download page and download Asee.
4. Once finished, the downloaded file will appear under APPLICATIONS in your iTunes® library.
5. Connect your iPhone® to your computer. Your iPhone® will be displayed under DEVICES on the left side in the iTunes® menu. Click to open the device.
6. Open the applications menu from the top tab area and select SYNC APPLICATIONS and then select Asee to add the Asee application to your iPhone®.
7. The Asee application will now appear on your iPhone® screen.

*Disclaimer: iPhone is a registered trademark of Apple Inc.*

*BlackBerry is a registered trademark of Research in Motion Limited.*

*Android is a trademark of Google Inc.*

# MOBILE VIEWING

## From your iPhone®:

1. Open and Run the Asee application.
2. Select the setup icon in the bottom right corner of the screen.
3. Fill in the following information:

**Server IP:** Input your DVR's IP address.

**Port:** Input the port you forwarded in the MOBILE setup. Ensure that this port is also listed under mobile settings on your DVR.

**Default Port:18004 Default username: admin Default password: 123456**

**User ID:** Input the user ID that you have set under MOBILE settings on your DVR.

4. Once all the proper information has been entered on your iPhone® and on your DVR, press the BACK button in the top left corner of the iPhone® screen.
5. Press the PLAY button in the bottom left of the screen to start playing live footage from your DVR.
6. For more information on the Asee, please review the buttons and connections section below.

## BUTTONS AND CONNECTIONS

1. Viewing Screen
2. PTZ controls
3. Channel selection keys
4. Play & Pause
5. Snapshot
6. Full screen
7. Setup
8. Next group of channels (N/A for this DVR)
9. About ASee Button

**Note: Although the viewing software is free, you must have an iTunes® account to download it.**



## BLACKBERRY® VIEWING

Before viewing your DVR footage from your BlackBerry®, please ensure that you have the BlackBerry® desktop manager installed on your computer and you have port forwarded an extra port for mobile viewing.

# MOBILE VIEWING

## **Download from App World™:**

1. Open BlackBerry App World™.
2. Search Asee.
3. Select the Asee application and select download.
4. Go to MyWorld and select the Asee application to install.
5. When prompted, select Reboot Device Now.
5. Go to your Downloads folder  to launch the Asee application.

## **From your computer:**

1. Connect your BlackBerry® to your computer and open up the BlackBerry® desktop manager.
2. Select the APPLICATION LOADER option from the main menu. From there, select the START button for adding/ removing any applications to your BlackBerry®.
3. Browse and select the ASEE.ALX file from the Blackberry® folder on the software CD and click NEXT.
4. Once installed on your BlackBerry®, select the FINISH button to complete the installation.

## **From your BlackBerry®:**

1. The installed software will be located in the DOWNLOADS directory.  From the downloads menu, select the Asee software icon to start the application.
2. Once the program has started, select the settings icon  from the settings screen and input the following information:

**Host:** Input your DVR's IP address.

**Port:** Input the port you forwarded for your mobile setup. Ensure that this port is also listed under mobile settings on your DVR.

**User:** Input the user ID that you have set under the mobile settings on your DVR.

**Password:** Input the password that you have set under the mobile settings on your DVR.

**Default:** Input the channel you would like to start watching - the program allows you to change channels once the footage has loaded.

**Wi-Fi:** If connecting with mobile network select NO for this option. If connecting through a wireless network, select YES for this option.

3. Once you have input all the proper information, select SAVE to save the information and close the settings screen.
4. Once the settings screen is closed, select the PLAY button  to begin playing the footage.
5. For more information on Asee, see the buttons and their functions below.

1. Play
2. Camera Select
3. PTZ Controls
4. Settings Menu
5. Full Screen View



# MOBILE VIEWING

## ANDROID™ VIEWING

### ***From your Android™ phone:***

The easiest way to download and install the Asee application is directly from your Android™ phone's marketplace. A WI-FI network or 3G network must be available to your phone to download using this method.

1. Turn on the phone and enter the main menu.
2. Select the MARKET icon, and select the SEARCH icon  on the top right hand of the screen.
3. In the search field, type in Asee. The application will come up in the results. Asee is a free application.
4. Select the Asee application and press the INSTALL button on the bottom of the screen. The application will begin downloading and install automatically when the download is finished.
5. Once the application finishes installing there will be an option to open the application. Choose this option on the bottom of your screen.
6. From now on, the Asee application will be available from your main menu.

### ***Installing viewing software to your phone's SD card, from your computer:***

1. Connect phone to computer and open the memory card folder.
2. Insert included CD into drive and open up to view files.
3. Copy and paste the android-viewing software onto the phone's memory card or installation folder.
4. Open the SD card folder on your Android™ phone and choose the ASEE.APK file.
5. The file will install and be available from your main menu.

Market Main Screen



Search Screen



# TROUBLESHOOTING

<b>Mouse is not working</b>	<ul style="list-style-type: none"><li>• Be sure the mouse is connected to the proper USB port. The proper port for the mouse is the top USB port on the back.</li><li>• Try connecting the mouse to a different USB port.</li></ul>
<b>Remote control is not working</b>	<ul style="list-style-type: none"><li>• Be sure the batteries are installed correctly.</li><li>• Be sure you are pointing the remote at the IR sensor.</li><li>• Point the IR Remote at the camera lens and press a button. You should be able to see the IR LED flicker through the DVR monitoring device.</li><li>• Try replacing the batteries in the remote.</li></ul>
<b>HDD light is blinking</b>	<ul style="list-style-type: none"><li>• If the hard drive is playing back footage or recording, the light will blink to notify you that there is activity.</li></ul>
<b>I am prompted to put in a password for everything</b>	<ul style="list-style-type: none"><li>• The password enable set to ON in the SYSTEM MENU.</li></ul>
<b>Cannot power off DVR</b>	<ul style="list-style-type: none"><li>• The DVR is set to run as long as it is plugged in.</li><li>• To power off the DVR go to MAINTAIN--&gt; SHUT DOWN.</li><li>• Disconnect the power cable after the DVR has displayed NOW YOU CAN POWER OFF SAFELY.</li></ul>
<b>The hard drive fills up too quickly</b>	<ul style="list-style-type: none"><li>• Check the video quality you are using. If you are using a high video quality then the hard drive will fill up faster. Try lowering the video quality.</li><li>• Adjust your schedule or resolution – If you are on Schedule Record for 24 hours a day the hard drive will fill up faster. Try switching periodically to Motion record.</li></ul>
<b>DVR beeps whenever motion is detected</b>	<ul style="list-style-type: none"><li>• Buzzer is set to ON. Go to the ALARM setup and turn the buzzer function OFF.</li></ul>
<b>The DVR keeps beeping</b>	<ul style="list-style-type: none"><li>• There could be video loss, HDD loss, motion detection or no HDD space on your DVR. The DVR can be set to alarm when these actions take place. The alarm alerts you if there is tampering with the camera to DVR connections. Check your connections and keep the DVR in a safe place where it will not be tampered with or moved around.</li><li>• Disconnect and reconnect all camera connections to make sure they are snug and tight fitting.</li></ul>
<b>The DVR is not recording according to my schedule</b>	<ul style="list-style-type: none"><li>• Check to see if you have the proper time set on your DVR. Refer to the instruction manual under RECORD → SCHEDULE.</li><li>• Double check your schedule record times – you may have it set on the no record function.</li></ul>
<b>Playback video is choppy</b>	<ul style="list-style-type: none"><li>• Check the FPS for each camera that is recording the choppy video. Refer to your settings in the MAIN MENU. The higher the FPS the smoother the video. If the FPS is set too low the video will appear choppy.</li></ul>

# TROUBLESHOOTING

<b>Cannot see all/one of the camera(s) on the monitor</b>	<ul style="list-style-type: none"><li>Check if the cameras are properly connected to the back of the DVR and to a power source.</li><li>If using the 4 to 1 power connector, make sure it is plugged into a power source and each of the cameras.</li><li>Check CAMERA SETUP from the MAIN MENU to see if any of the cameras are turned off.</li></ul>
<b>I have lost video footage</b>	<ul style="list-style-type: none"><li>The cameras might have been tampered with. Be sure to check that all connections are secure and properly set.</li><li>The HDD overwrite feature is enabled. When enabled, the DVR will begin overwriting the earliest stored footage when the HDD is full.</li><li>Unplug the power to the cameras and/or DVR and plug it back in.</li></ul>
<b>The cameras are not appearing in sequence mode</b>	<ul style="list-style-type: none"><li>Check if you have selected START ROTATE in the FUNCTION TOOLBAR. The cameras will start to sequence according to the sequence dwell time.</li><li>You must be in LIVE viewing mode.</li><li>To stop, click STOP ROTATE in the FUNCTION TOOLBAR.</li></ul>
<b>Nothing is recording however all the images are appearing on the screen</b>	<ul style="list-style-type: none"><li>You must initiate the recording to start by pressing the RECORD button on the remote.</li><li>Check under Record Setup in the main menu to make sure all the cameras are set to ON.</li><li>Check your record schedule to make sure the DVR is set to record that hour.</li><li>Verify that the HDD is installed and formatted in the DEVICE menu.</li></ul>
<b>The camera picture is too dark</b>	<ul style="list-style-type: none"><li>Adjust the camera's brightness settings under MAIN MENU→CAMERA→COLOR.</li><li>Try moving your camera to a brighter area.</li><li>Make sure the camera is not pointing directly into a light source.</li><li>Your camera may not be getting enough light towards it during the day. Adjust the sunshade (top of camera) to allow more sunlight.</li></ul>
<b>The night vision will not turn on/I can't see at night</b>	<ul style="list-style-type: none"><li>Night vision turns on automatically when the sensor detects a lack of light. If your cameras are in a space with too much light, the night vision will not turn on.</li></ul>
<b>My DVR will not acquire an IP address</b>	<ul style="list-style-type: none"><li>Check the Ethernet connections, ensure that the connection lights are lit (on the router and the back of DVR).</li><li>Try using a different Ethernet cable and/or a different port on your router.</li></ul>
<b>The NETWORK SETTINGS screen on the DVR has no information</b>	<ul style="list-style-type: none"><li>Be sure the DVR is properly connected to the router. There should be green link indicator lights if the DVR is properly connected.</li><li>Make sure the DVR IP Allocation is set to DHCP. This is a standard default setting that will work in most networking situations.</li><li>Power cycle the DVR to ensure it is properly connected and the IP Allocation is set to DHCP.</li></ul>

# TROUBLESHOOTING

<b>Cannot view online footage using my external IP address</b>	<ul style="list-style-type: none"><li>Sometimes your router will not allow you to view the footage with your external IP address because the DVR is connected to the same router. Try typing the DVR's <b>internal</b> IP address in the address bar.</li><li>If using a port other than 80, add your port forwarded port to the end the IP address.</li><li>See the NETWORK SETUP section for setup instructions.</li></ul>
<b>Cannot view the DVR through a remote Internet connection</b>	<ul style="list-style-type: none"><li>Port forwarding may not be set up correctly.</li><li>The external IP address of the DVR may have changed. Try setting up a DDNS account to stay connected with the latest IP information.</li><li>The ISP may be blocking port 80. Try changing HTTP Port to 8080. <b>Be sure to reconfigure the port forwarding.</b></li><li>Refer to the NETWORK SETUP section of the manual for detailed instructions on REMOTE VIEWING set up.</li></ul>
<b>The browser keeps freezing/I can't play the footage</b>	<ul style="list-style-type: none"><li>Make sure you have an up-to-date browser to view the footage with the proper ActiveX options.</li><li>Make sure the browser is Internet Explorer. The software will not play on any other browser.</li><li>Download all Windows Updates to make sure you have the latest version of Windows and Internet Explorer.</li></ul>
<b>The video is choppy when viewing live footage online</b>	<ul style="list-style-type: none"><li>When multiple Users view the DVR at the same time, it slows the connection to the DVR. Try accessing the DVR at a later time.</li><li>The speed of your Internet connection may be too slow. Check with your ISP if the video seems to be choppy no matter when you check it.</li><li>It is normal to experience a small time delay between the live footage and the network viewing.</li></ul>



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